An Economic Analysis of Agriculture and Food Cross Border Movements: Windsor-Detroit and Sarnia-Port Huron

Agri-Food Issues and Policy Concerns with a focus on the Agri-Food sector within the Essex, Lambton and Chatham-Kent Communities: A Scoping Project

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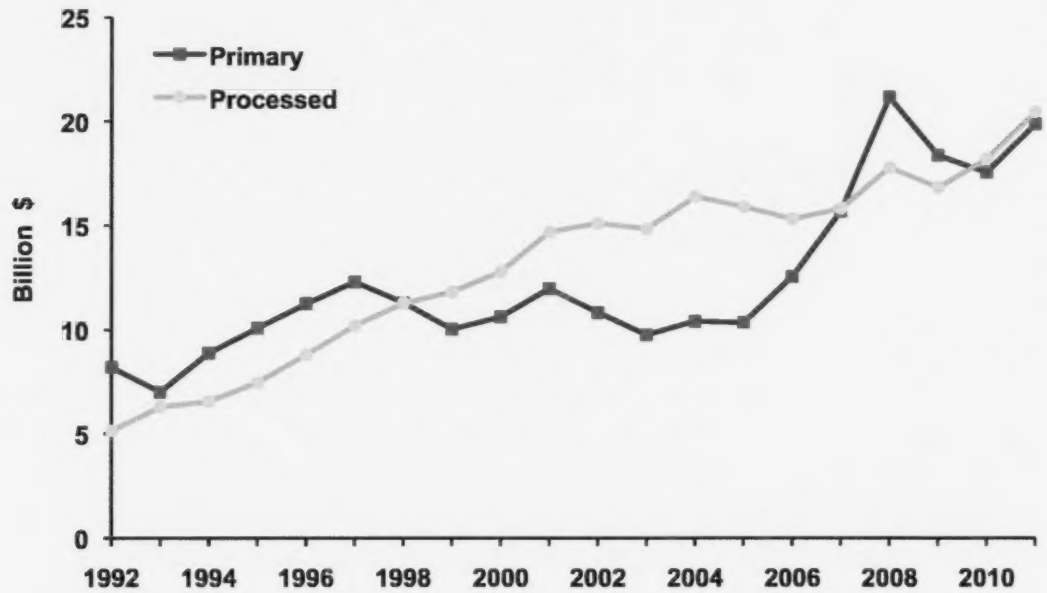
1 Introduction

The importance of two way trade to Canada, and to Ontario is well known, and acknowledged. The importance of cross border trade at selected border crossings in Canada, and Ontario is also well known, with a particular focus on the critical nature of selected non-food manufactured products. The importance of Canada-US agri-food trade and cross border flows has not been as fully documented, or understood to the same extent.

According to a report from Agriculture and Agri-Food Canada AAFC (2013), in 2011 Canada was the sixth-largest exporter of agricultural and agri-food products in the world, valued at $40.3 billion or 3.3% of the total value of world agriculture and agri-food exports. The United States is the major single receiver of Canadian primary agricultural and agri-food exports – the US purchased 48.5% of the value of all Canadian agricultural and agri-food exports in 2011.

As would be expected, food manufacturing plays a crucial role in increasing the value of Canadian agri-food exports. Processed agricultural products made up for approximately half of the value of total agri-food exports in 2011. The value of agri-food exports has risen for both primary and processed goods, as shown in Figure 1.Total exports of processed products increased from $5.2 billion in 1992 to $20.4 billion in 2011, as did the export of primary agriculture products, which increased $8.2 billion to $19.9 billion between 1992 and 2011.

Figure 1 – Canadian Exports of Agriculture and Agri-Food Products, Primary and Processed, 1992 - 2011



Source: adapted from AAFC (2013)

Ontario plays an important role in food manufacturing and primary agriculture exports. The Alliance of Ontario Food Processors (AOFP, 2012) has identified Ontario as the third largest food cluster in North America, with the province's food and beverage processing directly providing 120,000 jobs and generating close to $7 billion in exports in 2010, and over a third of the nation's processed food exports. This industry generated over $37 billion in revenue in 2010, which is over 15% of Ontario's total manufacturing revenues. The food processing industry is integral to Ontario's primary agriculture sector, with Ontario food processors buying around 65% of the province's primary agricultural output.

Of the 3000 food and beverage processing firms in Ontario (AOFP, 2012), about 150 (or 5%) of the firms are situated in three counties adjacent to the major border crossings in Southern Ontario: Essex, Chatham-Kent, and Lambton (referred to as the EKL region in this report). Two border crossings in southern Ontario, the Ambassador Bridge linking Windsor and Detroit, and the Blue Water Bridge linking the region to Port Huron, Michigan, are important to Canadian exports to the United States, accounting for fully 25% of US-Canada Trade (Galleger, 2011). Border traffic congestion has been a major issue at the Detroit-Windsor crossing (Davey and Austen, 2012). To address the congestion problem as well as the need for an additional crossing for security and future growth, the proposed new bridge at Detroit-Windsor is moving towards construction and eventual opening for later this decade, or early next decade (CBC News, 2012).

In recognition of the increased importance of agri-food trade in the EKL region, the University of Windsor's Cross-Border Institute seeks to gain a deeper understanding on the impact of agri-food cross border movements, the structure, scale and issues within the Ontario agriculture and food sector, and the future opportunities or challenges for this cross border movement,. This scoping study also examines the linkages to this sector, with a specific focus on the agri-food industry within Essex, Kent, Lambton Region (EKL).

1.1 Purpose and Objectives

The purpose of this project is to provide the University of Windsor's Cross-Border Institute with a deeper understanding on the scale, diversity and impact of the agri-food cross border movements, as well as a focus on the issues of federal trade, border security and relevant food and comparative product regulations. The scoping study will also undertake a specific focus on the agri-food industry within Essex, Kent, Lambton Region (EKL) and the implications of these issues, policies on this industry.

The objectives of this study are:

1. To provide a brief overview of the development of the agri-food sector in EKL.
2. To provide an overview of the key elements along the agri-food supply chain involved in the agri-food cross border movements within the EKL region.
3. Provide an overview of the broad policy developments affecting agri-food cross border movements in this sector, and within the industry in the EKL.

4. Conduct a SWOT analysis, to analyze the opportunities, constraints, and recent developments affecting cross border movements in agri-food, and to provide study conclusions, identify possible next steps, and as appropriate identify possible policy recommendations.

1.2 Report Outline

The report outline follows the objectives for the study. Section 2 provides the higher level historical trends in primary production, food manufacturing, agri-food employment within the EKL region. This section also includes the agri-food trade trends at the Windsor/Detroit and Sarnia/Port Huron crossings. The final subsection highlights key observations from these historical trends.

Section 3 provides a synopsis of the interviews with a number of farm, food and government organizations as well as with several farm, food and related firms. Section 4 provides the SWOT analysis. Section 5 details the Conclusions and Recommendations for Next Steps resulting from the analysis and interviews. Sections 6-11 provide the references and additional background information in the Appendices.

2 Historical Agri-Food Trends in the EKL region

This section provides an overview of the agri-food sector in the EKL region. This analysis places the region's agri-food industry within the provincial context. The sections below provide an overview of the trends in of the primary agriculture and food processing industries as well as its employment and the significance of agri-food cross border trade.

2.1 Primary Agriculture

The EKL region is a major agricultural producing region. Table 1 presents an overview of census farms, total farm acreage, and average acreage per farm for census years between 1991 and 2011 for Essex, Kent, Lambton and for Ontario. The EKL region is a significant element of primary agricultural production in Ontario. Over 10% of Ontario agricultural land and farm operations are located in EKL.

While overall farmland area in Ontario shrank by 6% between 1991 and 2011, farm land acreage remained constant within the overall EKL region. Agriculture land acreage increased in Lambton County by 3.9% between 1991 and 2011, in contrast to provincial the trends in farmland declines.

Overall, revenues per farm in the EKL region tend to be larger than the Ontario average.. Appendix A provides additional detail on farm size and farm revenue in the region.

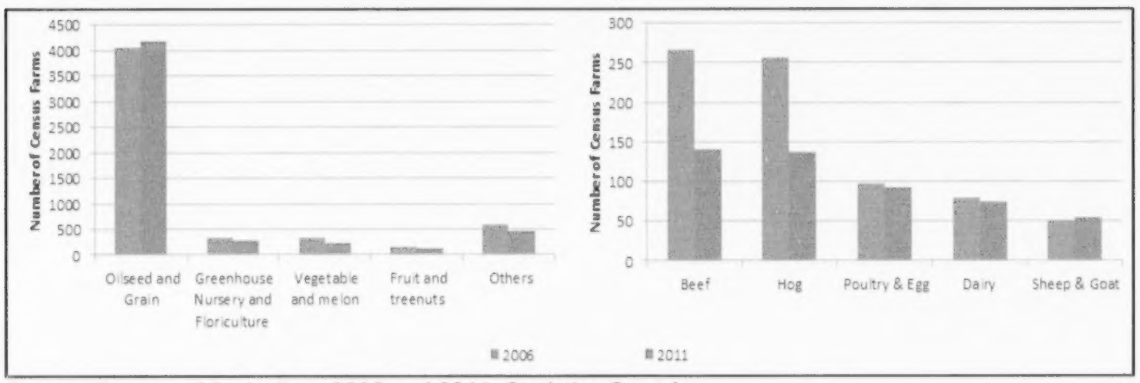
The majority of the farms in the region in 2006 were field crop operations. The number of field crop farms increased in 2011, while the number of operations in all other farms types remained constant or decreased. This largely reflects the rise in grain and oilseed prices between 2006 and 2011, which made field crop production much more profitable in this period and resulted in more multi-enterprise farms being reported as "field crop" farms. Winter wheat, soybeans and corn are the dominant cash crops in the region. The second largest categories of farm are vegetable, fruit, tree nuts, greenhouse, nurseries, and floriculture operations, but the number of farms in this broad subsector fell by about a quarter this period, consistent with long-run trends in the consolidation of farm across Ontario.

Table 1 – Number of Census Farms, total farm acreage, and average acreage per farm for census years between 1991 and 2011

	1991	1996	2001	2006	2011
Essex					
Area of Census Farm (ac)	330,276	351,414	334,122	329,776	328,580
Number of Census Farms	2,215	2,109	1,789	1,740	1,581
Average Acreage per farm	149.1	166.6	186.8	189.5	207.8
Kent					
Area of Census Farm (ac)	568,088	584,765	552,402	553,769	546,615
Number of Census Farms	2,822	2,690	2,352	2,196	2,049
Average Acreage per farm	201.3	217.4	234.9	252.2	266.8
Lambton					
Area of Census Farm (ac)	569,574	596,270	604,555	589,407	591,862
Number of Census Farms	2,682	2,622	2,427	2,281	2,153
Average Acreage per farm	212.4	227.4	249.1	258.4	274.9
EKL					
Area of Census Farm (ac)	1,467,938	1,532,449	1,491,079	1,472,952	1,467,057
Number of Census Farms	7,719	7,421	6,568	6,217	5,783
Average Acreage per farm	190.2	206.5	227.0	236.9	253.7
ONTARIO					
Area of Census Farm (ac)	13,470,653	13,879,565	13,507,357	13,310,216	12,668,236
Number of Census Farms	68,633	67,520	59,728	57,211	51,950
Average Acreage per farm	196.3	205.6	226.1	232.7	243.9

Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs

Figure 2 – Number of census farms in the EKL region by farm type, 2006 and 2011

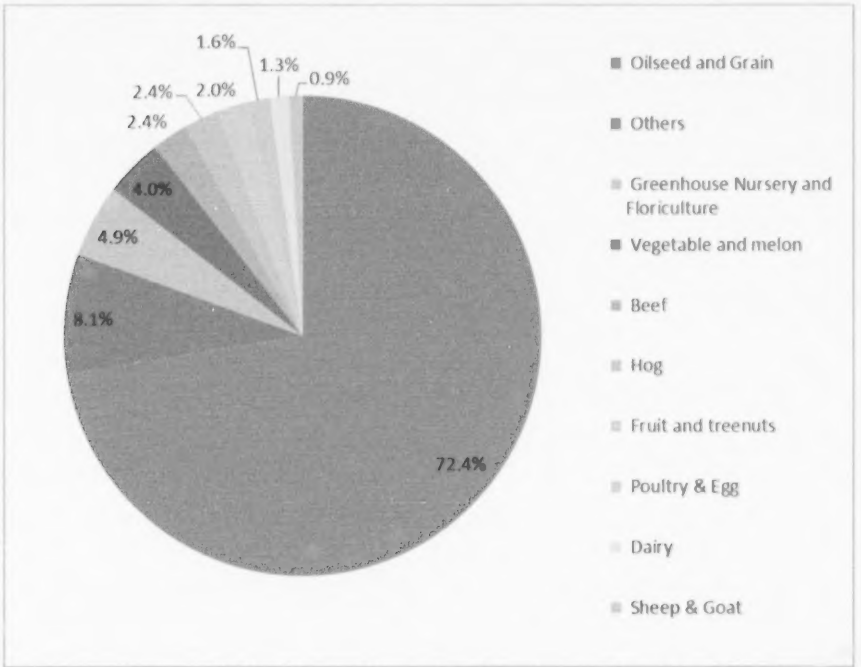


Source: Census of Agriculture 2006 and 2011, Statistics Canada

The majority of the farms in the EKL region are field crop operations (~60% in 2006), which is much greater than the Ontario average of 23% (in 2006); this percentage increased to over 70% in 2011 (the Ontario average was 33%). Around 50% of farms in Ontario are beef operations or in mixed production. However, these two sectors comprise less than 15% of farms in the EKL region.

Greenhouse, nursery, floriculture, vegetable, and melon operations represent major sectors in the EKL region (10.9% of farms). The major concentration of greenhouse, nursery and floriculture operations can be found in Essex (14%). The EKL region has 83% of the total greenhouse vegetable area in Ontario, 71 million sq.ft. The EKL region is a major contributor of total horticultural production in terms of provincial share (recently close to 30% of provincial horticultural value) and overall value of production (in excess of $100 million). The region's unique climate and soil conditions allow it to produce the majority of a number of horticultural crops, particularly tomatoes and peppers.

Figure 3 – Share of farms by sector within the EKL region in 2011



Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs.

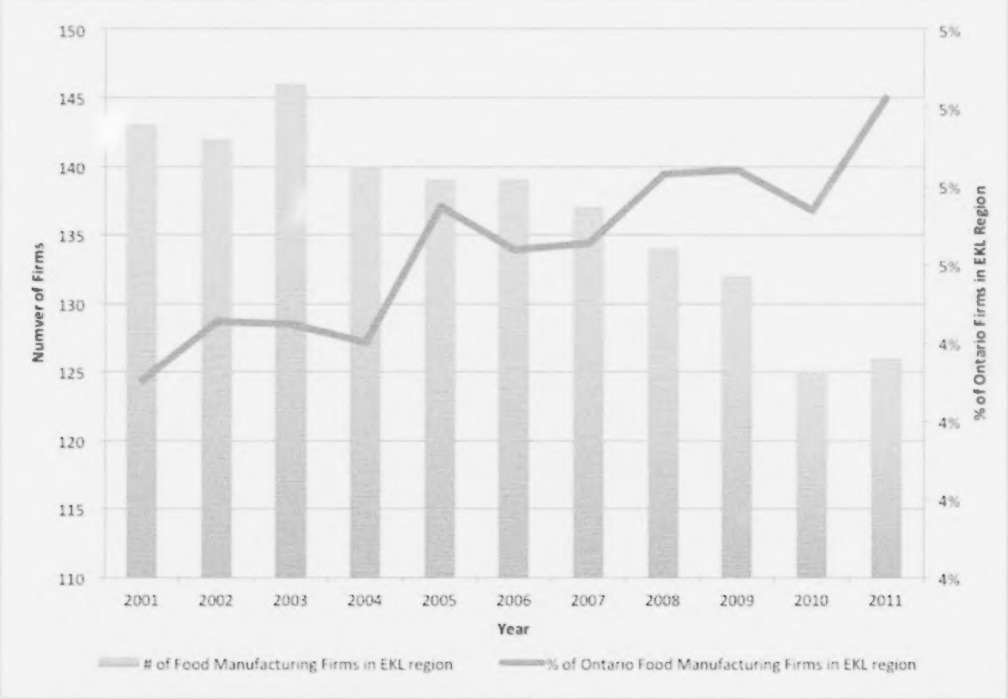
For more detailed analysis of primary production in the region please see Appendix A.

2.2 Historical Trends in food manufacturing in the EKL region

As a major agricultural region, with a large urban population within a relatively short distance, the EKL region has a developed food processing industry. This section provides background on trends within food processing in this region.

Figure 4 presents the number of food manufacturing firms in the EKL region from 2001 to 2011, as well as the share of all Ontario food manufacturing firms that are in the region. The number of food manufacturing firms in the EKL region declined by approximately 10% since 2001, and the region's share of food manufacturing firms in the province has increased as the ongoing consolidation in this sector proceeded more quickly in other regions of the province.

Figure 4 – Number of food manufacturing firms in the EKL region and share of Ontario's food manufacturing sector, 2001 to 2011



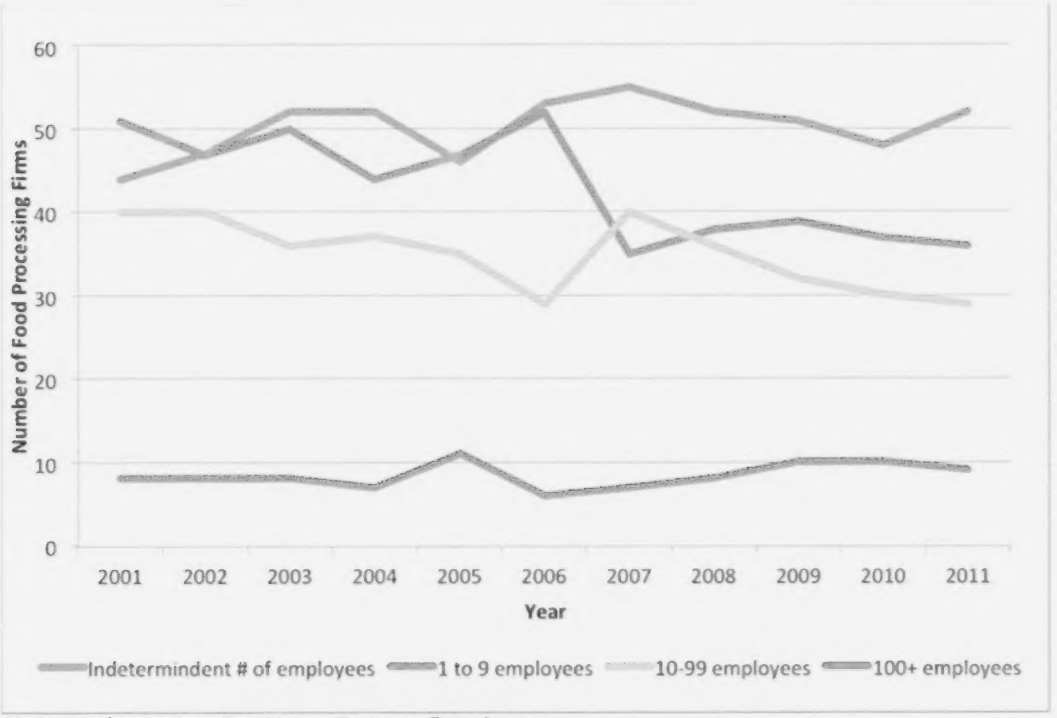
Source: Canadian Business Pattern Database

Food manufacturing firms in the region were identified as being predominantly small firms in a study by Ridgetown College (2002); small food processing firms appear to be less prevalent in the region today. Figure 5 breaks down the number of food manufacturing firms in the EKL region by size, according to the number of employees, from 2001 to 2011. The number of firms with less than 100 employees has been declining, the number of firms with over 100 employees has remained steady.

There are a number of large food processing firms in the region-notably in processing vegetable products. Leamington is the site of a large plant owned by H.J. Heinz Company. Sun-Brite Foods Inc. in Ruthven produces canned tomatoes, sauces, condiments, beans and pasta under brands Unico and Primo. Bonduelle has operations in Tecumseh, as well as outside the region. Other major food processing firms include:

- Del Monte Canada Inc.
- Countryside Canners Co. Ltd
- Lakeside Packing Company Limited
- Nation Wide Canning Limited
- Weil's Food Processing Ltd.

Figure 5 – Number of food manufacturing firms in the EKL region by number of employees, 2001 to 2011



Source: Canadian Business Pattern Database

For more information on food processing in the region please see Appendix B.

2.3 Employment trends and Outlook

This section draws on the previous work of economic development agencies within the counties to outline trends and challenges in employment Essex, Lambton and Chatham-Kent. Appendix C contains more detailed summaries of these publications.

2.3.1.1 Windsor - Essex

Across all sectors in general Windsor-Essex has seen a net out migration of workers. The 2011 census showed a 1.2% decrease in overall population from 2006, though in comparison to the 2001 census the county population is up 3.6%. The 2011 census showed a total population in

Windsor-Essex of 388,782. Using taxfiler data, net migration to the region was - 9,943 from 2005-2010, 6,729 of these were workers were between 25 and 44. As a result the Windsor Essex Economic Development Corporation (WEEDC) has tasked a Windsor-Essex regional task force with creating a worker attraction and retention plan, focusing on development and recruitment of youth (Windsor Essex, 2012).

Agriculture, Forestry, Fishing and Hunting employment increased 13.8% from 2008 to 2011 and is continuing to increase, while employment in supporting agri-business remained nearly constant from 2010-2011, with a 0.07% increase in the number of small-medium sized enterprises. The number of business establishments involved in Agriculture, Forestry, Fishing and Hunting increased from 1,096 in 2006 to 1,248 in 2011. In the WEEDC view, wineries are seen as an area for expansion within Essex, with wineries seen as expanding the profile of the region as market share of locally produced wines increases (Windsor Essex, 2012).

2.3.1.2 Chatham-Kent

Chatham-Kent has experienced both population decline and employment declines, with employment declining at a faster rate than population. The unemployment rate was about 9% in mid-2011, down from highs of over 15% in late 2009. The unemployment rate in the region has been higher than the neighbouring Windsor-Essex and Sarnia-Lambton communities for much of the period between 2005 and 2011. The age demographic of the Chatham-Kent is relatively older than other regions in Canada, as younger people exit the region.

This outmigration is recognized by the local economic development organization. Local jobs may "pay below their levels of qualification or significantly lower than their previous job". This is a significant disadvantage for the region in attraction and retention of workers. Chatham-Kent also has a small commuter workforce relative to other areas of Ontario, with 89% of workers living in the region (Chatham Kent, 2011).

One of the reasons for this is a skills gap, in which the skills of potential employees do not fit with the skills of those Chatham-Kent employers who are looking to hire. Compared to other regions in Ontario, Chatham-Kent has a smaller proportion of the population with post-secondary education, as well as a higher percentage of population without at least a high school diploma. Cultural barriers to continuous lifelong learning may also be in play in the Chatham-Kent as many workers lack high school diplomas (Chatham Kent, 2011).

The focus for this community is on value-added agriculture, market development, diversification and innovation. The number of farms in the region declined during 2006 to 2011, from 3,270 to 2,834, and is expected to continue to decline. There were 785 jobs in food and animal food manufacturing in 2006 in the region. The number of jobs in each of the industries in the food processing sector is expected to fall by 2016.

Table 2 - Projected Jobs in Farming and Value-added Processing in Chatham-Kent

NASICS	Industry	2006 (census)	2011	2016
0111	Farms	3,270	2,834	2,629
3112	Grain and Oilseed Milling	25	23	22
3113	Sugar & Confectionery Product Manufacturing	95	86	85
3114	Fruit & Vegetable Preserving & Specialty Food	350	318	314
3115	Dairy Product Manufacturing	-	-	-
3116	Meat Product Manufacturing	25	23	22
3117	Seafood Product Preparation & Packaging	125	114	112
3118	Bakeries & Tortilla Manufacturing	80	73	72
3119	Other Food Manufacturing	85	77	76

The Ridgetown campus of the University of Guelph is located within the region and may provide additional opportunities in value added agriculture for the region. The campus is also home to the Centre for Agricultural Renewable Energy and Sustainability, which supports allied research in the use of agricultural crops for food, fuel, materials and oils (Chatham Kent, 2011).

2.3.1.3 Sarnia - Lambton

Sarnia-Lambton is also facing demographic challenges related to both losing skilled young adults and not attracting skilled immigrants to the region. Much of the current work force is skilled in traditional occupations. Sarnia-Lambton also has a relatively older population as compared to the rest of Ontario. About 15% of jobs in the region are filled by commuters from other regions, who work in Sarnia-Lambton but live elsewhere. Prior to 9/11 Sarnia-Lambton was able to attract some commuters from Michigan, but since then more restrictive border controls have limited the availability of these workers.

Sarnia-Lambton experienced less unemployment than neighbouring Windsor-Essex and Chatham-Kent during the 2009 recession but unemployment in the region was still higher than Ontario as a whole.

Total employment in agriculture, forestry and fishing in 2006 was 2,810. For this county, agriculture and the bio-economy are among the 11 key target industry groupings identified in the county's study. Farming jobs pay below regional average with median incomes of $14,000 for farm workers and $26,000 for farm owners; clearly some of these are not full-time employment positions. It is estimated that $400 million is generated annually from the agricultural sector in the region.

Table 3 - Median Incomes of Agriculture and Bio-Economy Occupations

Occupation	Median Income
Farm and farm managers	$14,076
General Farm workers	$26,617
Nursery & Greenhouse workers	$22,452
Farm supervisors and specialized livestock workers	$21,942
Landscaping and grounds maintenance labourers	$29,579
Bookkeepers	$30,504
General office clerks	$35,983
Retail salespersons and sales clerks	$23,310
Petroleum, gas and chemical process operators	$98,978
Process control and machine operators, food and beverage processing	$42,022
Stationary engineers and auxiliary equipment operators	$99,843

Food manufacturing employment in Sarnia Lambton was 220 in 2006, down from 235 in 2001. This is expected to continue to decline through 2016.

Table 4 Projected Employment by Industry

Industry	2006 Jobs	Projected 2011	Projected 2016
Farms	2740	2095	1994
Pesticide, Fertilizer and other agricultural chemical manufacturing	145	141	147
Value-Added Agri-food	200	178	180

The projections suggest that jobs will be lost or remain constant for all of the key occupations in the agriculture and food manufacturing sector (Sarnia-Lambton, 2013).

2.4 Agri-Food Trade

Exports of primary and processed agri-food products are critical to Ontario, but Ontario consumers and parts of the provincial agri-food industry also depend upon access to primary and processed products from outside the province. Thus, Ontario benefits from two-way agri-food trade through its border crossing points in the EKL region.

The total value of all Ontario exports in 2012 was $134 billion; total imports were $173 billion. 75% of total exports were shipped through either Sarnia/Port Huron or Windsor/Detroit and 64% of imports cross through one of these border points. Agri-food exports represent 7% of total exports through the Windsor/Detroit crossing, and 3% of exports through the Sarnia/Port Huron crossing. On the import side, 9% of total imports through the Windsor/Detroit crossing are agri-food products, while 11% of imports through Sarnia/Port Huron are agri-food products.

Total agri-food exports from Ontario were valued at around $6.82 billion in 2007 to $7.98 billion in 2012. Over half (50.32%) of the agri-food products are exported through the Windsor/Detroit border crossing, with a value of $3.54 billion in 2007 and $4.16 billion in 2012. The Sarnia/Port Huron crossing handled approximately $1.21 billion in agri-food exports in 2007 and $1.26 billion in 2012. Combined, the two border crossings handled just over 2/3 of agri-food exports from Ontario. A large percentage of Canadian agri-food exports through the two crossings are processed goods.

Ontario imported $14.3 billion worth of agri-food products in 2012, up from $10.54 billion in 2007. Agri-food imports through the Windsor/Detroit border crossing were 45.2% ($6.5 billion) of all agri-food imports to the province in 2012, while 30.07% ($4.3 billion) of agri-food imports crossed the border at Sarnia/Port Huron.

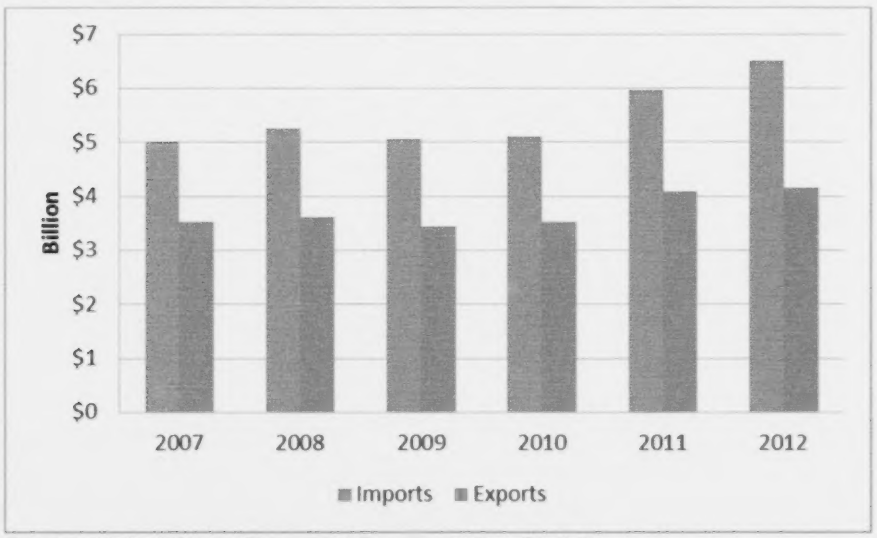
Within agri-food products, prepared foodstuffs made up the highest portion in the value of agri-food exports ($4.32 billion in 2007, increasing to $4.85 billion in 2012), followed by vegetable products ($1.21 billion in 2007 to $1.88 billion in 2012). The value of exports from prepared foods and vegetable products are rising, particularly in prepared foodstuffs.

On the import side, prepared foodstuffs are also the largest category by value with $5.12 billion in imports in 2007, increasing to $7.26 billion by 2012. Vegetable products are the second most imported agri-food category, with $3.65 billion in imports in 2007 increasing to $4.52 billion in 2012.

At both the Windsor/Detroit and Sarnia/Port Huron border crossing there is a trade deficit in agri-food products with a greater value of imports coming into Canada than exports going to the United States. Since 2010, there has been a shift to send more exports to the U.S. through Windsor/Detroit, while the share of Ontario exports to the U.S. through Sarnia/Port Huron has declined. Since 2010, the Windsor/Detroit crossing has seen an increase of 3.6% of Ontario's agri-food exports and a 4.37% increase in share for non-agricultural exports. At the same time the share crossing at Sarnia/Port Huron has fallen 3.41% and 4.07%, for agricultural and non-agricultural exports respectively.

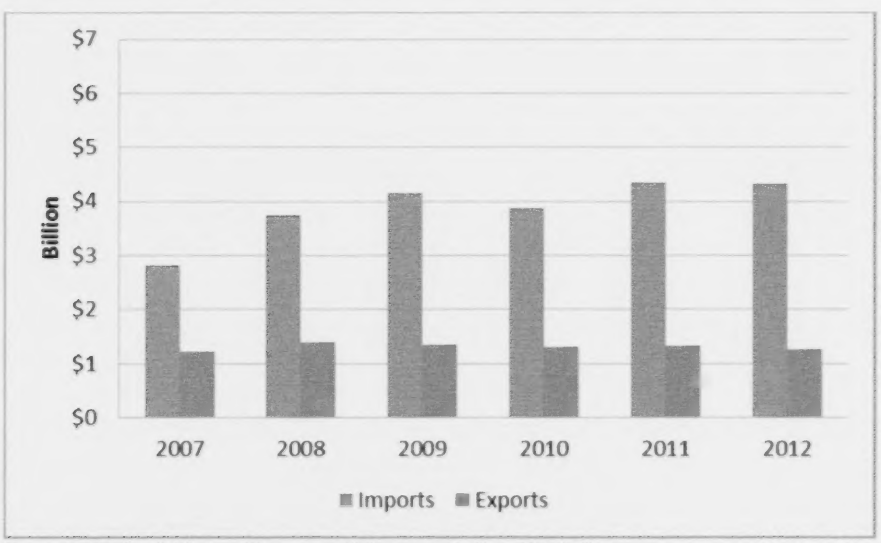
For imports the Windsor/Detroit crossing now accounts for 4.04% more of Ontario's overall agri-food imports than in 2010, while the share of Ontario's non-agriculture imports crossing at Windsor/Detroit as fallen slightly (0.33%). The Sarnia/Port Huron crossing accounts for 1.11% less of Ontario's agri-food imports, but 0.89% more of non-agriculture imports than in 2010.

Figure 6 – Trade Balance of agricultural products exported through the Windsor/Detroit border crossing, from 2007 to 2012



Source: United States Bureau of Transportation Statistics

Figure 7 – Trade Balance of agricultural products exported through the Sarnia/Port Huron border crossing, from 2007 to 2012



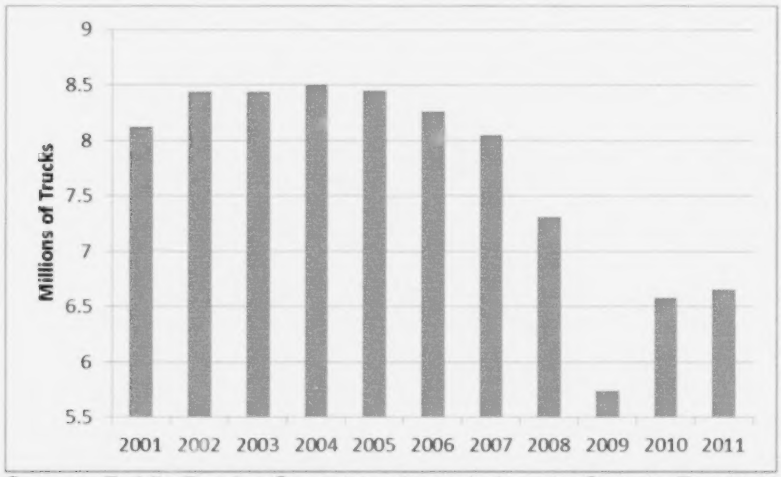
Source: United States Bureau of Transportation Statistics

Detailed information about agri-food trade through the Windsor/Detroit and Sarnia/Port Huron border crossings can be found in Appendix B, including specific breakdown of composition of prepared foods being imported/exported.

Figure 8 shows the volume of trucks that cross at Ontario US-Canada border crossings. It shows that the number of trucks crossing between Canada and the US was declining prior to the recession, but has been increasing since 2009. This is likely to impact the Windsor/Detroit and Sarnia/Port Huron crossings as they are two of the largest crossings.

Agri-food products rely much more on truck transport than do non-agricultural products. About 96% of agricultural goods (by value) were exported via trucks through the Windsor/Detroit border crossing in 2012, and 80% through the Port Huron port were by truck. In comparison, 68.5% and 42.6% of non-agricultural goods were exported via trucks through Detroit and Port Huron, respectively. Thus, congestion and delays at the Windsor/Detroit crossing can be expected to have a relatively larger impact on agri-food trade compared to other type of exports.

Figure 8 – Truck Traffic All Canada-US Border Crossings in Ontario



Source: Public Border Operators Association via Ontario Trucking Association

A larger share of agri-food products exported through the Sarnia/Port Huron border move via Rail (19.9%) compared to the Detroit border crossing (3.86%). Specifically, approximately 17.9% of prepared foodstuffs and 27.0% of vegetable products were exported through the Sarnia/Port Huron crossing via rail.

It should be recognized that although much of the agri-food industry within the EKL region follows similar trends as the broader Ontario agri-food industry, the region has several unique cross-border relationships. The very sizeable greenhouse vegetable industry is built around access to the US markets, with a majority of its production exported, and exported through the Windsor/Detroit crossing. A more limited amount of greenhouse vegetable product flows through the Niagara region crossings. The Ontario sugar beet production is centered in the Chatham-Kent and Lambton municipalities (see Figure 14 in Appendix A) with almost 4,200 hectares of production. All of this production is shipped to a Michigan sugar refining facility

primarily through the Sarnia/Port Huron crossing. In the national scale of cross border trade, these shipments may be seen as very small, but they are unique to the region, and to the cross border trade at these two crossings.

2.5 Observations

This section provides an overview of some essential elements of agri-food in the EKL region and the border crossings at Windsor/Detroit and Sarnia/Port Huron. It observes the following:

- Primary agriculture in the EKL is dominated by field crops and horticulture. Livestock production is a relatively small component of primary agriculture in EKL
- Horticultural production in EKL forms a large share of total Ontario horticultural production; for example, EKL accounts for over 80% of field tomato production; EKL also represents a large share of Ontario greenhouse production, particularly greenhouse vegetables
- EKL accounts for a large share of field crop production, especially wheat and soybeans.
- EKL is also home to many small-medium sized food manufacturers, but there are also several notable large food manufacturers in the region.
- Agri-food trade is a significant proportion of trade through the major border crossing in the EKL region. The value of products imported from the US through the border crossings at Detroit and Port Huron is greater than the value of exports. Prepared foods are the largest category of both imports and exports through these border crossings
- For the EKL region the importance of these two border crossings is of critical value to the greenhouse vegetable industry located around Leamington, and Ontario's sugar beet production with the majority of acreage and farms in Chatham-Kent and Lambton.
- For individual food manufacturers in the region, the access to US markets provides significant opportunities for either exports of finished product, or for imports of selected inputs needed for the processing operations. However, the % impact on the entire industry does not match the impacts on the above two primary production industries.

3 Interview Results

Over 25 interviews were held with organizations and individuals as part of the research for this project. These interviews involved a number of face-to-face or phone interviews with major manufacturing/export trade associations, such as the Canadian Manufacturers and Exporters, Ontario Greenhouse Vegetable Growers, individual greenhouse growers, the Canadian and Ontario food processing trade associations, as well as discussions with other participants (US and Canadian) involved in overseeing cross border trade at these two border crossings. Interviews were also held with government departments, agencies, and with the Canadian Consulate in Detroit.

Appendix E provides a list of participants and the interview guide used in conducting these interviews.

Completed interviews:

In general, most interviewees focused upon general comments, analyses and concerns with agri-food cross border movements. In discussion with several farm and food industry groups, and several individual growers or food processors, more specific details and insights were obtained.

Overall the comments noted that border delays and costs exist; however, for the most part the industry and relevant government agencies have been able to manage the cross border movements to reduce day-to-day frictions, but not to completely resolve all such issues. It was recognized that with the existing independent regulatory systems of both nations random border inspections will continue. In the views of most respondents, the possibilities of future agri-food regulatory differences between the two national jurisdictions are also expected to continue. Considerable efforts at the private farm/food firm level remain key to smoother cross border movements. In turn, day-to-day efforts by the respective government agencies to work with industry, and other agencies have also led to improvements, although not as quickly as desired by some participants.

The two major bi-national initiatives launched in 2011 by the President Obama and Prime Minister Harper, *Beyond the Border* and the *Regulatory Cooperation Council* may offer the necessary framework for substantive improvements in cross border agri-food trade. However, these gains were viewed as very dependent upon the success of the series of pilot projects already launched by these two bi-national initiatives. Once the pilot projects have successfully completed and have proven their capacity to obtain sustained improved change at all of the Canada-US border crossings, the respondents' believed more sustained progress to improve regulatory harmonization can occur.

The commentary below is a synopsis of the interviews following along the questions identified in the short questionnaire (copy of the interview guide is in Appendix E)

Question #1: Please describe your firm, organization-scale, scope, products and services; or, describe your role, division of government has in the Canada\US agri-food trade?

The Canadian Manufacturers and Exporters (CME) noted that this was an issue for all of its members- food/non-food manufacturers or exporters, and that the CME had been working on improvements to border infrastructure and border delays for a number of years. A priority for the CME is the successful implementation of the bi-national Beyond the Border and Regulatory Cooperation Council initiatives. In these efforts the CME is assisted by other national food and non-food manufacturing organizations as well as larger firms-domestic and multinationals

The CME identified efforts by both border security agencies to address documentation, IT and trusted trader pilots for their members. They also noted that the farm and food sector-important participants in cross border trade, had different legislative/regulatory issues to be addressed which meant resolution of their border related issues had a different path.

This general view was reinforced in one manner or another by almost all participating firms, groups or individuals. It was recognized that cross border movements remained important for the industry, and for specific processors, or commodities. But, in general there had not been great changes in the border security/enforcement issues in the past several years. Several groups identified the recent (past decade) rise in the value of the Canadian dollar, the recession and ongoing concerns with the costs of the impacts of random inspections. While estimates of these costs were identified, no interviewee expressed or confirmed or detailed analyses of such costs-over time, or over a range of products.

General comments focused on the current experience, expertise of those agri-food firms already involved in cross border trade, or the use of experienced third party agents (e.g. customs brokers) to ensure that the cross border movement of agri-food products was as effective and efficient as possible. This meant fulfilling all regulatory requirements and the appropriate documentation as efficiently possible, so as to consistently ensure minimal delays or disruptions at the border. In several cases the daily volumes of truck shipments by some agri-food firms of up to 100 trucks/day, or the annual movements of over 10,000 truckloads (or even higher) by several firms within this sector reflect both the necessary demand for such skills, and the capacity to successfully move fresh and processed products on a continual basis.

The CME has identified the just-in-time movements of very large multinational firms in the automotive or other manufacturing industries which can lead to better management of the cross border processes, these same concepts seem to be increasingly applied to the agri-food cross border shipments. These firms are moving products to numerous locations across each border often with identified time slots for arrival, and therefore there is a strong self-interest in minimizing border delays of any sort for this sector.

Question #2-What challenges have you/your stakeholders experienced either inbound/outbound in product movement at either border crossing?

In general the same cross border challenges affecting any manufacturing sector affect agri-food cross border trade. However, the additional regulatory requirements from the CFIA, FDA, USDA, APHIS and others on food and meat product safety, sanitary and phyto-sanitary certificates, movement of soil accompanying fresh horticulture, floral or nursery products, and the real health of animals issues with livestock trade(feeding, watering) all create unique impacts on the exporters and trucking firms in agri-food trade.

The discussion with the US interviewee noted the different labeling and other regulatory measures in Canada as concern. But again, those farms and food firms/exporters with experience in cross border trade have developed (or purchased) the necessary skills to generally address these issues when exporting to Canada.

One specific concern raised was the handling of samples (fresh or processed product) into the other country- this was more often noted by Canadian exporters. Efforts to open new market opportunities still had to meet the full regulatory requirements. It was noted that the difficulty of doing so for small agri-food sample shipments, or for a new products not falling into a traditional category(HS code) could be a serious challenge. The lack of experience in handling sample shipments for the individual exporter/importer, and for the affected border agency was noted.

Question #3- To what extent are product regulations (e.g. MRLs) an issue? In what way?

For most groups and individual respondents, this was noted as the most serious regulatory challenge given the diversity and complexity of agri-food product regulatory regimes between the two nations. It was often noted that this was one of the key issues facing agri-food exporters and random inspections. Most respondents quickly identified that for experienced exporters, this was just part of the new business environment to ensure they did meet the appropriate regulatory controls.

Those exporters moving fresh products, including floral products, identified additional concerns with varying interpretations of certain regulatory measures, variations in identification of pests, and the different approaches by the appropriate regulatory agencies in the other jurisdiction- such as when dealing with quarantine issues (fortunately not a common occurrence). Again, the record of compliance, past experience and management skills of those agri-food exporting firms seemed to reduce the severity of the issues.

Changes in future agri-food regulatory measures in each jurisdiction were viewed as an ongoing concern. The different experiences of border officials at other border crossings (beyond Windsor/Detroit and Sarnia/Port Huron) were also raised. A perception among several Canadian agri-food exporters indicated that there seemed to be patterns in these random inspections, but few participants expressed clear concise measures of the costs of such inspections to confirm/deny the perception. The handling of shipments of meat products at cross border points was also noted as another complex area for differences in product regulations and standards as well as the consistency in approach to border inspections between the two countries

It was this area of the interview discussion where the overall complexity, long history of regulatory differences, and differences in approach to inspection/regulation become the most varied between different fresh/processed food products. It was also the area where the uniqueness of the agri-food trade was most relevant in comparison to experiences identified by the CME for non-food manufacturers.

Question #4-To what extent are process regulations (e.g. truck weights) an issue? In what way?

Almost all respondents noted that these issues were well known. It was viewed that such differences between national or subnational jurisdictions were successfully handled either through the trucking firm, the customs brokers, or the exporter directly. In general, information on border security regulations was viewed as improving over time, and ongoing investments in IT (public and private sector participants) were identified as one means of reducing border delays involving documentation.

Question #5- To what extent are infrastructure and resource/capacity levels an issue? In what way?

This question elicited responses focusing on the current Canadian infrastructure investments at the Windsor/Detroit crossing, and those plans for a 2nd bridge crossing. Respondents were well aware of the evolving deadlines with the second crossing at Windsor/Detroit and its anticipated completion and opening by the end of the decade. It was noted that the Sarnia/Port Huron crossing had recent public investments to improve its capacity. Respondents also identified possible cross border delays and accompanying costs to the exporters due to existing congestion and limits on border staffing.

All participants recognized budget constraints on border security resources, and on the associated regulatory agency officials' availability as continuing issues. However, the recent sequestration decisions in the United States brought these impending budget concerns more clearly into focus. Limits on overall availability and reduced overtime were identified as leading to additional border delays, and increased costs of passage. This led to an acknowledgment of continued future efficiency measures to address possible future increases in border movement related costs.

The lack of adequate inspection capacity was also identified as a challenge for those truckloads undergoing an official inspection, or the timing of the cross border shipment, all having impacts on the speed and decision of the inspection

Question #6- How have these issues impacted your business/business of your stakeholders? What are the short term/long term impacts?

For all exporters, extensive delays at the border crossings can seriously disrupt schedules for deliver which can lead to increased costs to the agri-food exporter. There was also the possibility of some shipments turned back requiring the exporter to determine to return the shipment to the home country (noted mostly by the Canadian interviewees) in order to salvage some value from the shipment, if possible.

Several firms/exporters with sufficient experience and financial capacity have invested in facilities in the other jurisdiction (primarily in the United States) to reduce the uncertainty and the financial risks associated with such delays. Respondents again noted the management experience and skills of a number of firms were a means of successfully addressing border crossing risks

Question #7-What key changes, public or private, could be made to dramatically improve the situation?

For many of the groups and individual firms, interviewed, the risks and costs of border delays, inspections were serious concerns. However, these were perceived to be manageable under most circumstances. Among the major changes identified included removing delays due to possible budget constraints/sequestration decisions, and an overall improvement in the detailed understanding of their industries (and the unique nature of their products) by border officials.

Investments on border infrastructure and in IT capacity of the participating border and regulatory agencies were noted and appreciated. Differences in these investments and timing of these decisions were also noted as continuing concerns to agri-food exporters and importers.

The overall bi-national initiatives were also noted, and identified as positive steps-although there were mixed opinions on the speed and full success of the initiatives. Many of the provincial groups often deferred detailed questions and discussions on these bi-national efforts to the national commodity or industry organizations. This would seem to follow the role identified by and for the CME and its associated national partners in working with the various regulatory agencies at the border, their US counterparts, and with the US government. The limited discussions with US counterparts signaled the same process- cross border policy discussions seem to be focused at the national level-unless the firm or industry group was fully seized by the critical importance of the cross border trade to their operations.

One key concern noted from several of the interviews was the perceived lack of coordination and cooperation between the various agencies enforcing the regulations-customs, food, others-within one country, and between the two countries. Differences in regulatory approaches, in IT capacity, or the willingness to provide high caliber customer service were noted. For fresh, frozen products-including meat shipments-this becomes critical as the stability of the product shipped can be irrevocably damaged if the climate controlled environments are sufficiently disrupted.

The concept of the trusted trader used in non-food manufacturing was identified by the CME. It was also noted that a pilot approach to a Customs Self Assessment (CSA) was underway, with the success, and final review/approval for this CSA approach for the food sector still pending. This CSA approach, while a challenge to initiate for any individual firm satisfactorily, would benefit those longer term exporters of agri-food products where the volume of shipments is large enough, the documentation of the exporter or importer, trucking firm and trucker could all be clearly and consistently identified/verified, and the shipments could be tracked easily and consistently (likely to just one/few destinations consistently). It would be hoped that the final approval and documentation on how to apply this CSA concept to other agri-food exporters could be realized shortly.

Respondents noted concerns with new/pending legislative and regulatory changes both with border security, and more importantly with differing approaches by Canada and the United States (at this time). These challenges involve food safety, sanitary and phyto-sanitary requirements and other environmental/health related regulations which apply to primary commodities, or processed food products. In many cases, similar demands are not required for non-food manufactured products which again differentiates this sector

It was noted that while larger firms have the capacity or access to stay on top of new and changing regulatory commitments. In turn, it was noted that many agri-food SMEs and their related farm/food associations would not always have the necessary management capacity to remain consistently up to date on proposed changes, impacts, and possible alternatives to propose to reduce costs or delays. The success of the two bi-national cross border initiatives was seen as a longer term opportunity to resolving a number of related border and regulatory issues for both large and smaller agri-food firms.

It was cited several times that there is a need to improve the capacity for these firms to better respond or anticipate regulatory changes This is particularly true for those regulatory measures which will impact the production/processing of the product within their home facility or farm. The new US Food Safety Modernization Act is an example of the future challenges facing those Canadian exporters of agri-food products, and the need to adapt as appropriate. The impending changes-and many have yet to be fully identified and placed into implementation-create uncertainty within affected industries.

This uncertainty can lead delays by industry in appropriate responses, in its preparation for the eventual changes, or how best to develop alternative regulatory directions to ensure implementation can be smoother/cheaper. These developments will require additional skills, time, and efforts by each firm's management to enhance in-house capacity, or to purchase the skilled insights from a third party. A number of third party sources were identified in this process, but other information and clarification opportunities were also suggested as improvements in needed information flows to the industry. It was noted that for more recent cross border participants, or smaller agri-food firms these would most likely be adversely affected unless they can be brought up to speed quickly.

The necessity of maintaining the capacity and expertise of the various regulatory and border agencies was also noted. Improved cooperation between agencies within each national government was also seen as a priority

As noted in the first paragraphs, cross border flows of agri-food trade are not perceived to be smooth or costless. Most participants believed that the skills and management capacity within the firms, or with their outside partners, do address and resolve most issues. Maintaining and improving this management capacity and skill base are seen as key future challenges.

Recent interviews provided greater insights into processed foods movements and issues. However, given the importance and scale of the greenhouse vegetable industry movements, this would be a priority sector for both any further analysis/commentary on cross border issues/policies, and a possible model for best business practices for those shipping between Canada/United States in terms of fresh produce, floral products and meat products. The subject of container sizes- a recent issue within the Canadian food processing industry, particularly in SW Ontario communities-was not raised specifically by the participants. This domestic issue could also alter the competitiveness of a number of processors, and the impacts of such a regulatory change should also be examined in context of cross border movements.

4 SWOT Analysis

Based on the information collected in the data analysis and the interviews, a SWOT analysis was conducted. The objective developed for this analysis was as follows:

> "Increased agri-food trade flows, with reduced costs and time delays in movements across the two border crossings in both directions"

The purpose of the SWOT analysis is to identify key external and internal factors that could play a role in meeting the objective.

The external factors are the opportunities and threats; these are factors external and in which the industry (all stakeholders, including government) has little or no influence. The opportunities are external factors which could help to achieve the objective whereas the threats are external factors which could hinder achieving the objective.

Strengths and weaknesses are factors internal, and over which some control and influence may be exerted. The strengths are internal factors that could help to achieve the objective and conversely the weaknesses are internal factors which could hinder achieving the objective. The SWOT analysis will help to identify areas of development that will help to achieve the objective of a more competitive trade system.

	Potential to Promote Objective	*Potential to Hinder Objective*
External Factors	OPPORTUNITIES	THREATS
Internal Factors	STRENGTHS	WEAKNESSES

The SWOT starts with the external analysis (opportunities and threats) because these are factors outside the Stakeholder's control. Then the strengths and weaknesses are identified because some influence can be exerted over them, given the observed opportunities and threats.

OPPORTUNITIES

- Increased demand on both sides of the border for Ontario/US fresh and processed agri-food products;
- EKL has a large supply base for horticultural products (greenhouse vegetables in particular);
- Interviews indicated that there are decreased regulatory delays at the border crossings- leading to reduced costs for agri-food trade movements;

- There appears to be an existing mindset to take actions on these issues, regulatory cooperation, reduced border delays.
- Increased costs of competitive agri-food products from other non-North American sources;
- Capability and capacity for truck movements and trucking firms to efficiently handle agri-food trade and border movements at the two border crossings

THREATS

- Both jurisdictions have binding budget constraints. This threatens increased costs of border movements in the future due to increased costs/delays of border security-including sequestration impacts;
- Increased costs of regulatory differences between the two jurisdictions with regard to agri-food health, safety, environmental regulation;
- Decreased demand for agri-food products from each jurisdiction in the other's jurisdiction, due to local procurement/"buy local" initiatives, Country of Origin Labeling, etc.
- Extensive delay to new infrastructure construction/maintenance at both border crossings due to non-agri/food sector issues;
- Uncertainty regarding adverse changes in regulation as it relates to of US/Can truck movements and trucking firms to efficiently handle agri-food trade and border movements at the two border crossings
- Uncertainty of future changes in national and provincial regulation affecting agri-food sector. There were substantial differences in views on the impacts of deregulation on specific issues without full harmonization of regulatory measures between the jurisdictions-although few expected full harmonization to occur within foreseeable future.

STRENGTHS

- Continued improvement of management capacity of agri-food firms involved in agri-food trade at the two border crossings to deal with existing/anticipated risks of border delays, costs; experienced traders and truckers.
- Continued and improved access to 3rd party skilled resources to assist in efficient cross border movements consistent with regulatory requirements (brokers, trucking agencies) – There is an infrastructure to facilitate trade.
- Implementation of proposed and possible new border procedures and policies by both national governments to reduce regulatory differences/delays at border crossings; Pilot projects.
- Internal efforts and priority by the government of Canada given to Canadian, and Ontario public and private sector initiatives to reduce cross border movement costs and delays thorough infrastructure, information, cooperation with US agencies, with own federal border agencies, and regulatory authorities; system in place to coordinate and improve these efforts, by AAFC

- Continued high level public sector priority given to improved trade, improved agri-food trade, and to long term reduction while meeting security requirements to lack of regulatory cooperation;

WEAKNESSES

- Diffuse knowledge and awareness of regulations by trade participants on both sides of the border; some lack of focus specific to agri-food in monitoring these border crossings
- Perceived lack of communication between government agencies and actors along the agri-food supply chain with respect to cross-border movement in agri-food.
- Lack of data and availability oriented towards research on border movement issues (waiting times, regulatory issues)

5 Conclusion and Recommendations for Next Steps

5.1 Conclusions

This economic analysis and scoping of the agri-food trade at the Windsor/Detroit and Sarnia/Port Huron border crossings as well as the agri-food sector activity in the EKL region clearly reveal a strength and consistency in the sector's trade and production capacity over time. These agri-food trade shifts have taken place during a period of major changes at all border crossings, and at a period of substantial national and international economic change- notably the dramatic changes in exchange rates over this last decade. The sector's performance also occurred with continual changes in regulatory oversight, in terms of border/customs, food safety, and environmental regulations among others-at the border crossings.

The private sector experience, its improved management capacity, and public sector priorities attached to improved agri-food trade would seem to be key factors in this success. Both industry and governments have attempted to reduce current and future cross border movement delays and costs-albeit not always with the most immediate results. It is unlikely that complete resolution of border crossing issues will result given the continued real differences in goals and objectives, and real differences in approaches between the two jurisdictions. Sustained efforts to reduce or minimize the impacts on trade flows, and on opportunities for increased trade-and increased primary production or processing-will be required of industry and government.

A trend observed in the interviews and in the economic analysis of the trade flows reveal a similarity to non-food sectors of the economy. Increased specialization of production or processing, and greater efforts-despite border delays-to fulfill just-in-time commitments to major retailers/buyers, and shifting inventory control towards truck movements reflect similar trends in other manufacturing sectors. In this light, greater priority to those efforts, or best practices in other sectors, to reduce border delays, costs and if possible limit the need for border inspection of documents should be pursued.

A key challenge is the perishability of a large number of agri-food products once their climate stable environments are upset or eliminated for considerable time. This places a more unique management pressure upon both the participating farms and food firms as well as on the public agencies responsible for both border security and customs, as well as those agencies with the food safety/pest control/environmental regulatory authority.

The two national governments in cooperation with various industry associations- food and non-food- are making substantive efforts to address border crossing issues. The Beyond the Border and Regulatory Cooperation Council initiatives offer the real opportunity to develop, test, implement, and transform pilot projects into normal business practices and significantly reduce cross border costs and delays. Unfortunately, despite substantial public and private sector efforts to date, these initiatives have yet to fully complete the first set of projects, and with those successes completed, re-assure all participants that these efforts can produce sustained improvements in regulatory cooperation between the two national jurisdictions, and reduced border delays.

This challenge is further enhanced with anticipated new farm/food regulatory initiatives being developed, improvements in the understanding of key science behind regulatory measures, and ongoing shifts (at times due to budget issues) in border security. The challenges are increased as the scale of cross border trade continues to evolve positively for the agri-food sectors in both jurisdictions.

The analysis of the agri-food sector within the Essex, Chatham-Kent and Lambton regions provides a snapshot of the current trends in primary production, processing and specialization in this sector over time. There are major similarities with other parts of the Ontario farm and food manufacturing industries and a number of unique developments in both farm production and food manufacturing in the EKL region. The relatively small significance of ivestock, dairy production- with associated changes in food processing of such products-stands in contrast to the overall scale of selected fresh horticulture production, greenhouse vegetable production, and in a smaller commodity, the sugar beet production in this region. In turn, the food manufacturing responses have varied as well reflecting longer term changes within the broader food manufacturing industry n the province/nation.

The economic analysis within this report has been provided to the University of Windsor and the Cross Border Institute for their use, and release. A number of possible next steps for further research, information dissemination, development of best business practices, and improved roles for private and public sector cooperation-on both sides of the border-are identified below. These recommended next steps reflect the insights of the George Morris Centre derived from the economic analysis, the interviews, and the scoping efforts, all of which may assist the University, the industry and relevant public agencies in determination of appropriate priorities for this agri-food industry and cross border trade.

5.2 Recommended Next Steps

The following next steps are recommended as possible follow ups to this study, and to addressing the objective or improving cross border trade, reducing costs and barriers, and improving the overall competitiveness of the agri-food industries on both sides of the border.

Potential next steps include:

- University of Windsor to work with the agri-food industry, regionally, provincially and with participating government departments/agencies to determine how best to assist with research to help in the successful implementation of various pilot projects through the Beyond the Border and Regulatory Cooperation Council;
- University of Windsor to work with the respective agri-food industry partners and participating government departments/agencies on the US side to accomplish similar results on the US border side;
- University of Windsor in cooperation with other agencies, trade associations, private industry and other interested parties on both sides of the border to explore the priorities for further economic analysis, research at all Southern Ontario border crossings involving agri-food trade;

- An early priority may be the economic analysis/quantification of the costs of the impacts of the border functions across the agri-food sector, with particular emphasis on the fresh product movement, and those food products most sensitive to weather or climate controlled environments for the product movements.
- University of Windsor in cooperation with industry and government agencies determine priorities for further research/analysis on priority projects to improve cross border movements-at the public, private sectors, including working with logistics, IT and transportation firms;
- University of Windsor in cooperation with other post-secondary institutions, to identify and work with various public funding agencies (e.g. Growing Forward II) on both sides of the border, explore and pursue to completion development of, and dissemination of best business practices for cross border agri-food trade;
- University of Windsor in cooperation with other post-secondary institutions as well as private and public sector bodies, examine means of continual improvements in the management capacity of private firms involved in cross border agri-food trade, as well as improvements in management capacity of public sector agencies involved in cross border agri-food trade;
- Another early priority given the management experience/skills of many larger farm and food companies already engaged in cross border movement is to examine and improve the management needs and skills available to small and medium size participants-current and future-in agri-food cross border trade; and,
- University of Windsor in cooperation with private and public sector groups, agencies to assist in improvements in early awareness, understanding, and development of options/responses to anticipated changes in regulatory measures affecting agri-food trade so as to better improve industry's responsiveness to public policy goals.

The Canada-US border crossings at Detroit and Port Huron account for a large volume of shipments. These cross border shipments are important to Canada's international trade and account for 75% of Ontario exports to the United States and 64% of Ontario's imports from the United States, and agri-food trade is an important part of that flow. Cross border movements between Canada and the United States also are significant to the communities of Essex, Lambton and Chatham-Kent. As a major agriculture and food producing area in Ontario, these communities will be better able to take advantage of proximity to the U.S. market with sustained improvements at cross border trade.

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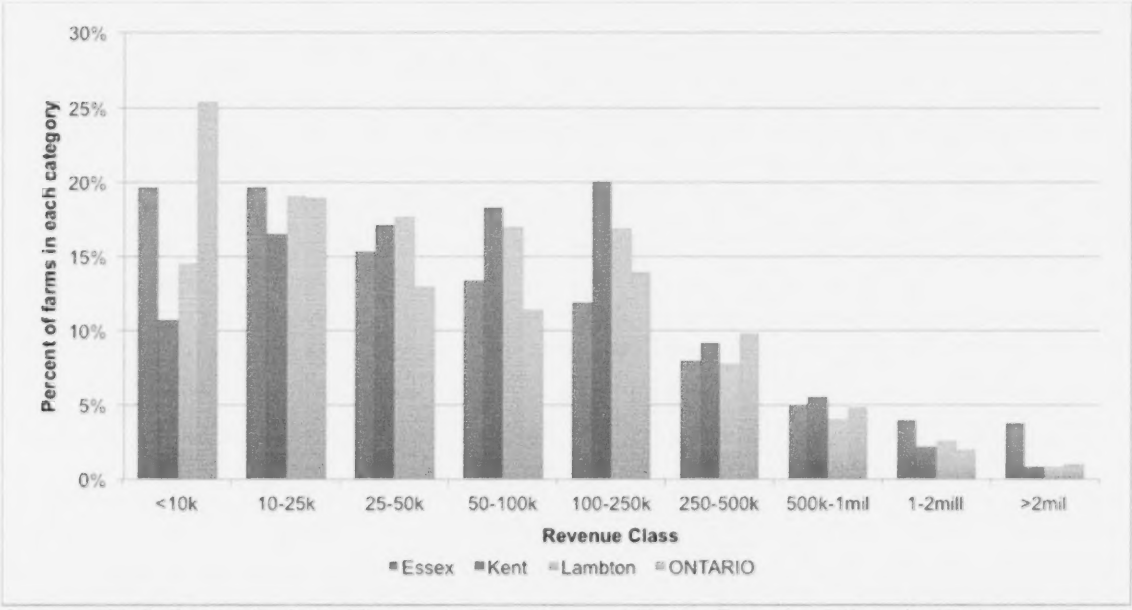
7 Appendix A

7.1 Detailed information on Primary Agriculture in Essex, Kent and Lambton Counties

The share of small farms with less than $10,000 in sales is less than the Ontario share. In 2006, only 10% of farms in Kent County had sales less than $10,000 compared to 25% of farms in all of Ontario, this percentage further dropped in 2011. Around 4% of farms in Essex County had revenue greater than $2 million in 2006, compared to 1% of farms in all of Ontario. In 2011, this percentage rose to over 5%.

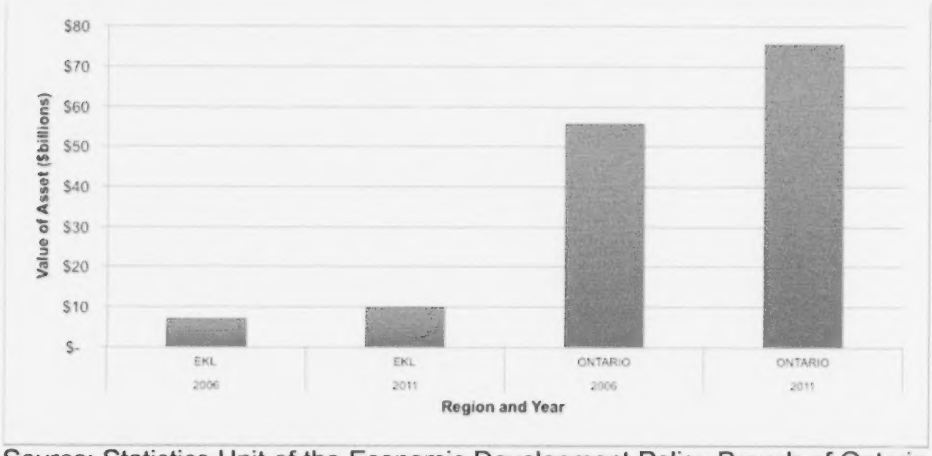
Figure 9 – Distribution of farm size by sales revenue within the EKL region and Ontario in 2006



Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs

Figure 10 presents the total land asset value of land in the EKL region and Ontario for the census years 2006 and 2011. Land contributes to the highest share of asset values in the EKL region. In 2006, the EKL region farms held 1.47 million acres of agricultural land worth $7.12 billion, an average value of $4,853 per acre. Agricultural land in the EKL region has had a higher value than the Ontario average; in 2006, the province had 13.3 million acres of agricultural land in 2006 valued at $55.9 billion, or just over $4,200 per acre. In 2011, while agricultural farmland acreage remained the same, value of the land in EKL increased to $9.95 billion, representing an increase in land value of over $1,900 per acre. This is compared to a provincial average increase of $1132 per acre in 2011.

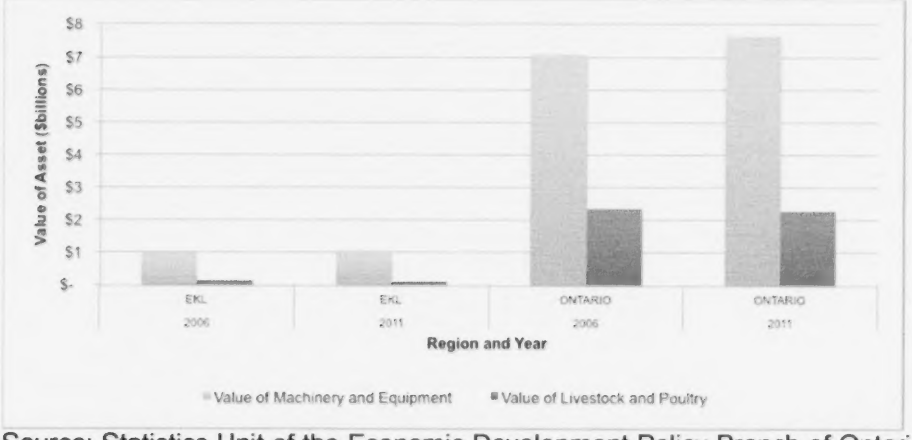
Figure 10 – Total land asset value of land in the EKL region and Ontario for the census years 2006 and 2011



Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs

Figure 11 shows the total asset value of machinery and equipment, as well as poultry and livestock in the EKL region and Ontario for the census years 2006 and 2011. The value of machinery and equipment was approximately $1 billion in the EKL region in 2006 and remained steady in 2011. In all of Ontario the value of machinery and equipment has risen by about $500 million in the same period. The value of livestock and poultry in EKL was small, at $123 million in 2006, falling to $107 million in 2011, representing only 5% of the province's livestock and poultry asset value in 2006 and 4.7% in 2011. Overall, the EKL region is not a major player in livestock production.

Figure 11 – Total value of machinery, equipment, livestock, and poultry in the EKL region and Ontario for the census years 2006 and 2011

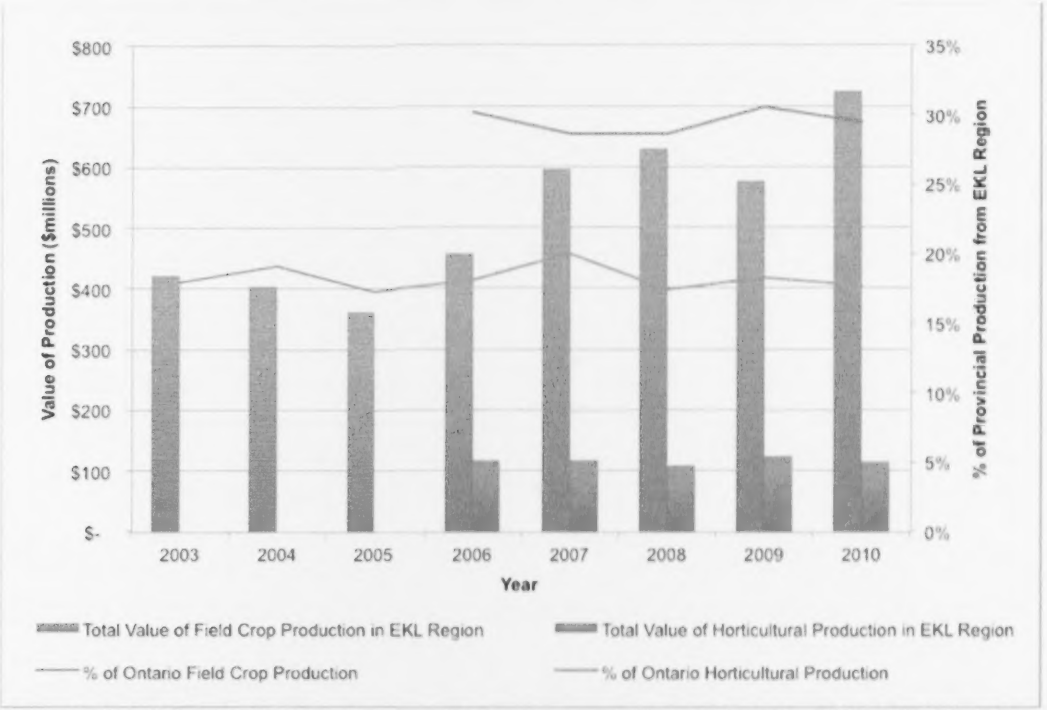


Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs

Field crop operations was a $422 million sector in 2003 and the value of field crop production from the region grew to over $725 million in 2010, compared to the large proportion of field crop operations only generating less than 20% of Ontario's field crop production.

Figure 12 shows the total value of field crop and agricultural production in the EKL region between 2003 and 2010 and the percentage of total Ontario production.

Figure 12 – Total value of field crop and agricultural production in the EKL region between 2003 and 2010, and percent of total Ontario production



Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs

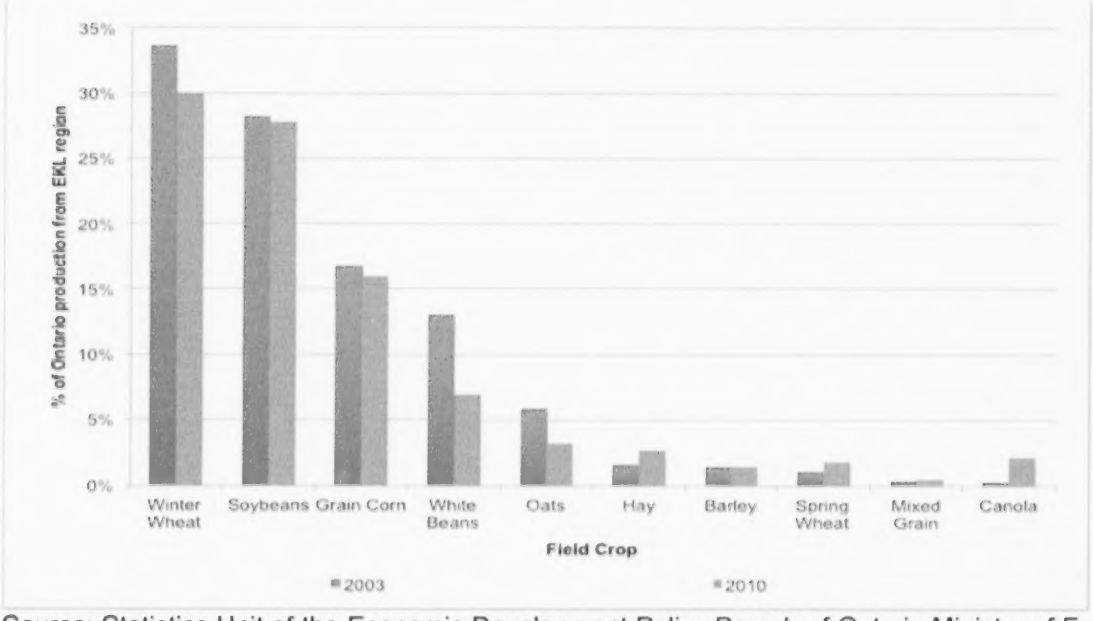
Figure 13 provides an overview of the change in percentage of Ontario field crop production from the EKL region from 2003 to 2010. Most of the field crop production occurred in Chatham-Kent and Lambton, which generated approximately 77% of total field crop revenue in the EKL region annually from 2003 to 2010. The three major field crops from the region are soybeans, grain corn, and winter wheat, with soybeans generating 41-55% of field crop revenue on an annual basis.

The EKL region has 96% of all sugar beet acreage in Ontario, 10,400 acres on 90 farms in 2011. Sugar beet acreage has increased 49% since 2001. All sugar beet production is exported for processing in the United States, primarily through the Sarnia/Port Huron border crossing.

The figure provides an overview of the percentage of total value of horticultural production by crop. The EKL regions produced over 80% of Ontario's field tomatoes, 44% of peppers, and 38% of dried onions in 2006. While production of field tomatoes remains strong, the share of pepper and cabbage production from the EKL region fell in 2011.

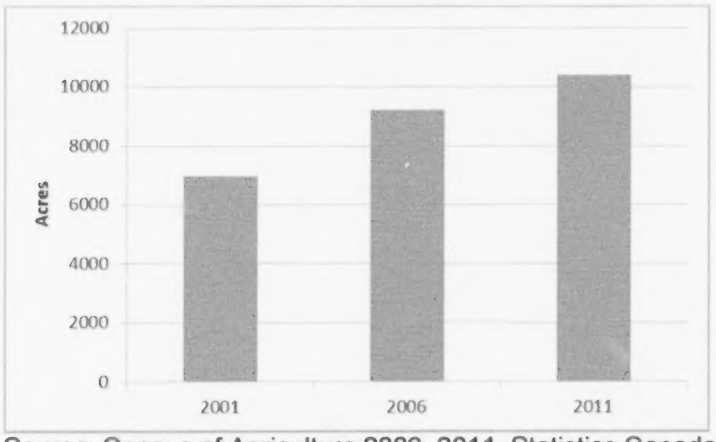
Figure 15 provides an overview of the percentage of total value of horticultural production by crop. The EKL regions produced over 80% of Ontario's field tomatoes, 44% of peppers, and 38% of dried onions in 2006. While production of field tomatoes remains strong, the share of pepper and cabbage production from the EKL region fell in 2011.

Figure 13 – Percentage of Ontario field crop production from the EKL region, in 2003 and 2010



Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs

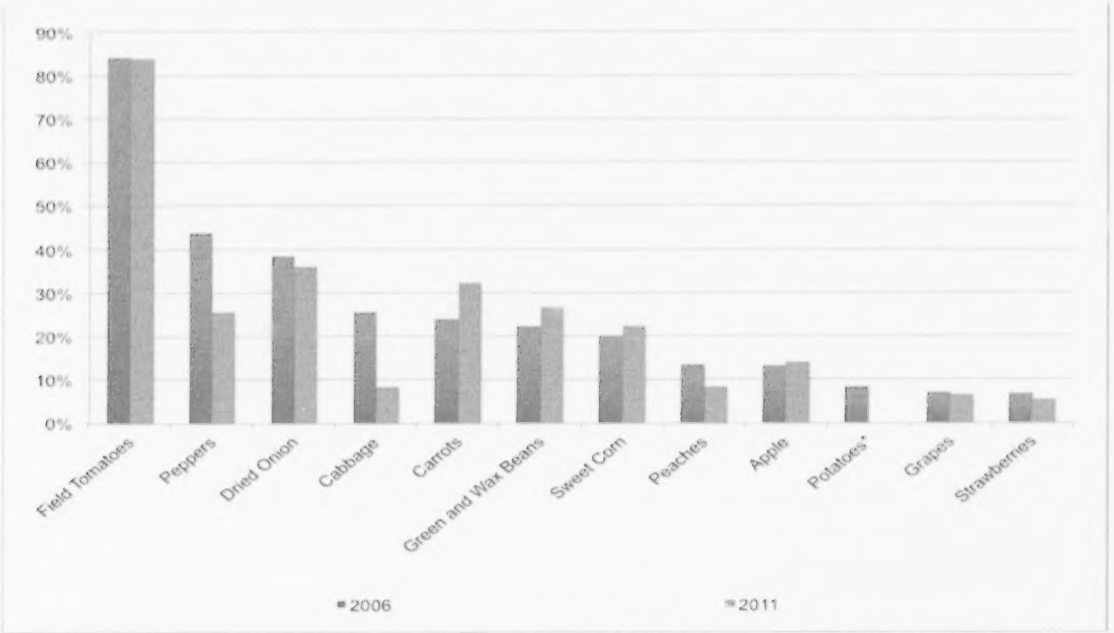
Figure 14 – Sugar Beet Acreage in EKL 2001-2011



Source: Census of Agriculture 2006, 2011, Statistics Canada

The figure provides an overview of the percentage of total value of horticultural production by crop. The EKL regions produced over 80% of Ontario's field tomatoes, 44% of peppers, and 38% of dried onions in 2006. While production of field tomatoes remains strong, the share of pepper and cabbage production from the EKL region fell in 2011.

Figure 15 – Percentage of total value of horticultural production by crop, within the EKL region from 2003 to 2010



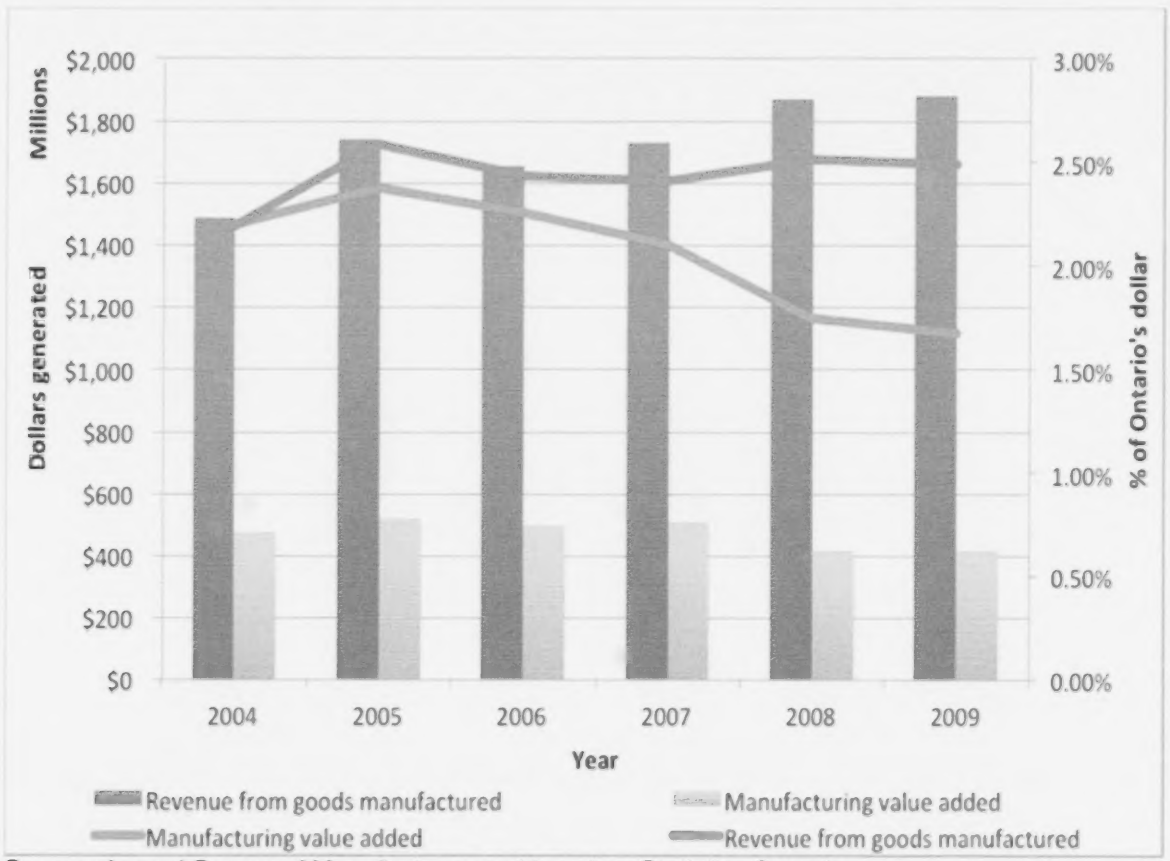
Source: Statistics Unit of the Economic Development Policy Branch of Ontario Ministry of Food, Agriculture, and Rural Affairs

8 Appendix B

8.1 Detailed information on Food Processing in Essex, Kent and Lambton

Figure 16 presents the value of sales and manufacturing value added from the food manufacturing industry from the EKL region from 2004 to 2009. Food manufacturing firms in the EKL region generated $1.49 billion in revenue in 2004, and this increased to $1.88 billion in revenue in 2009. This is over 2.5 times the combined value of field crops and horticultural crops produced in the EKL region in 2009. However, firms in the EKL region make up of only 2.5% of Canada's food manufacturing output (based on sales).

Figure 16 – Revenue and manufacturing valued added of food manufacturing firms in the EKL region, 2004 to 2009

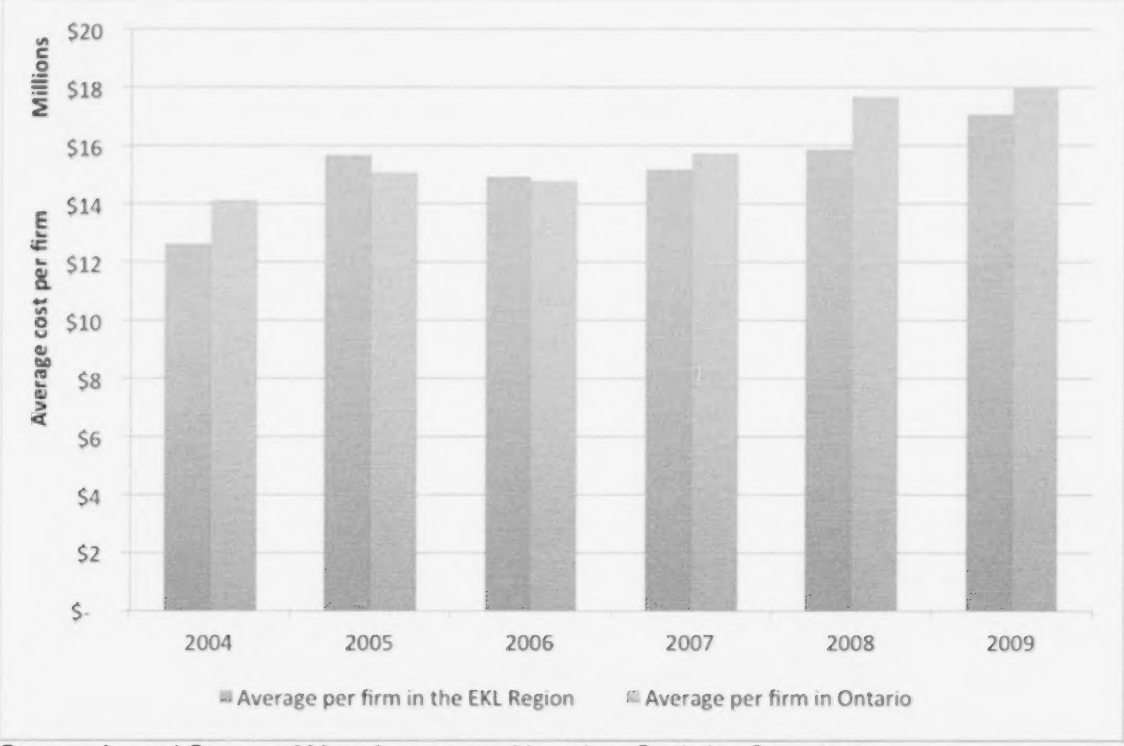


Source: Annual Survey of Manufactures and Logging, Statistics Canada

8.1.1.1 Material costs

Cost of supplies and material makes up for the highest cost for the average food manufacturing firms in the EKL region and in Ontario. Between 2004 and 2009, material cost increased from $12.7 million to $17.1 million on average for firms in the EKL region, and $14.1 million to $18.0 million on average for all food manufacturing firms in Ontario.

Figure 17 – Average expenditure on Supplies and Materials per food manufacturing firm in the EKL region and Ontario, 2004 to 2009



Source: Annual Survey of Manufactures and Logging, Statistics Canada

Table 4 shows the average wage and number of workers for production and administrative work employed by food manufacturing firms in the EKL region and Ontario between 2004 and 2009. A higher share of employment in the food manufacturing sector in the EKL region are in manufacturing jobs (direct labour) (80% in the EKL region vs 78% for all of Ontario). Manufacturing jobs in EKL generally pay better than the Ontario average

Table 4 – Average wage and number of workers for production and administrative workers employed by food manufacturing firms in the EKL region and Ontario, 2004 to 2009

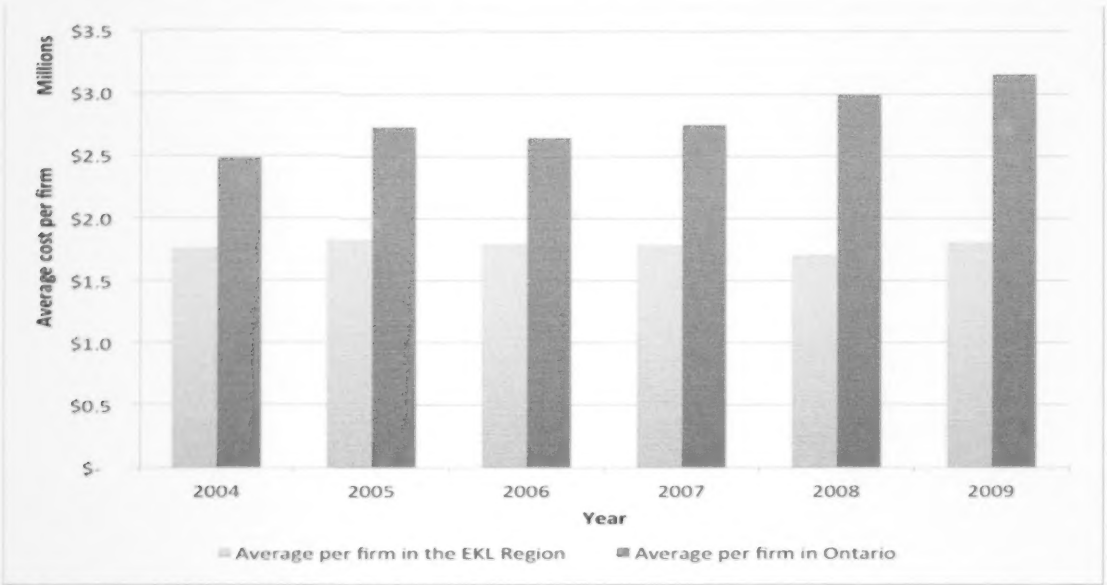
Year	Average wage per production workers		Average wage per administrative workers		Number of production workers		Number of administrative workers	
	EKL	ONT.	EKL	ONT.	EKL	ONT.	EKL	ONT.
2004	$39,986	$29,576	$92,848	$182,053	2,540	189,341	368	43,394
2005	$47,842	$30,363	$62,664	$172,321	2,162	181,142	545	46,425
2006	$45,100	$30,835	$55,159	$170,321	2,195	175,124	618	46,970
2007	$42,099	$31,767	$65,009	$172,388	2,402	173,134	563	46,987
2008	$44,216	$32,724	$62,228	$169,950	2,537	171,126	593	48,838
2009	$40,841	$33,182	$54,773	$173,063	2,706	174,795	679	49,693

Source: Annual Survey of Manufactures and Logging, Statistics Canada

8.1.2 Agri-food Sector Labour

Salary and wages make up the second highest cost for food manufacturing firms. Figure 16 shows the average payroll expenditure for firms in the EKL region and in Ontario. Salary and wages cost on average $2.48 million for all food manufacturing firms in Ontario, and $1.8 million for the average firm in the EKL region in 2004. While salary and wage costs for EKL have remained consistent for food manufacturing firms in the EKL region, it has risen to $3.15 million for the average Ontario food manufacturing firm.

Figure 18 – Average payroll expenditure per food manufacturing firm in the EKL region and Ontario, 2004 to 2009



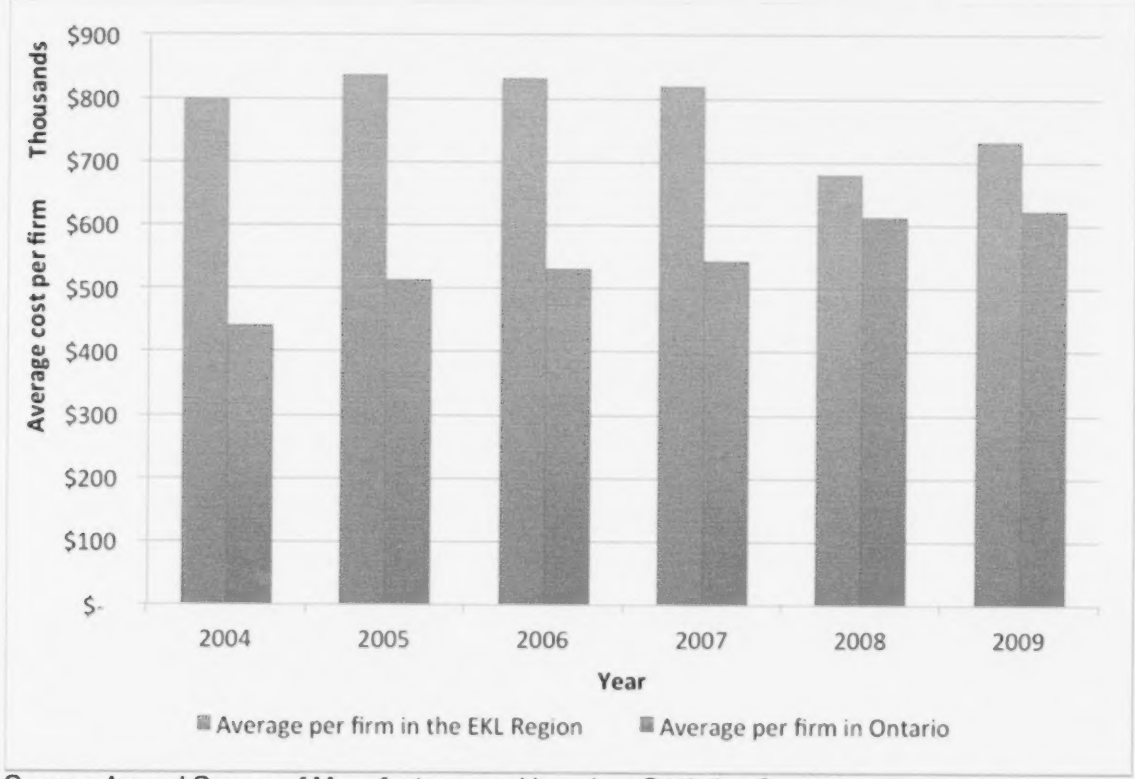
Source: Annual Survey of Manufactures and Logging, Statistics Canada

8.1.3 Other Input Costs

The third major category of expenditure for food manufacturing firms is energy, water utility, and vehicle fuels. On average, food manufacturing firms in the EKL region are much more energy and resource intensive than the average Ontario food firm. In fact, in 2004 average energy, water utility and fuel expenditure for firms in the EKL region is almost twice as high as the Ontario average. However, in recent years, while energy, utility and fuel costs for the average Ontario firm has been rising steadily from 2004 to 2009, this cost has fallen for the firms in the EKL region from $837,000 in 2005 to $732,012 in 2009 on average.

The fall in expenditure in this category has mainly been due to the decrease in water and energy expenditure (fuel only made up of 3.9% of expenditure in this category in 2004 for the EKL region, though it has risen to 6.7% by 2009; breakdown of expenditure in this category was not reported at the Ontario level by Industry Canada). Seeing as energy prices have generally risen in this period, it could be that firms in this region are improving the efficiency of their production practices, or switching to less energy intensive products.

Figure 19 – Average energy, water utility, and vehicle fuel expenditure per food manufacturing firm in the EKL region and Ontario, 2004 to 2009

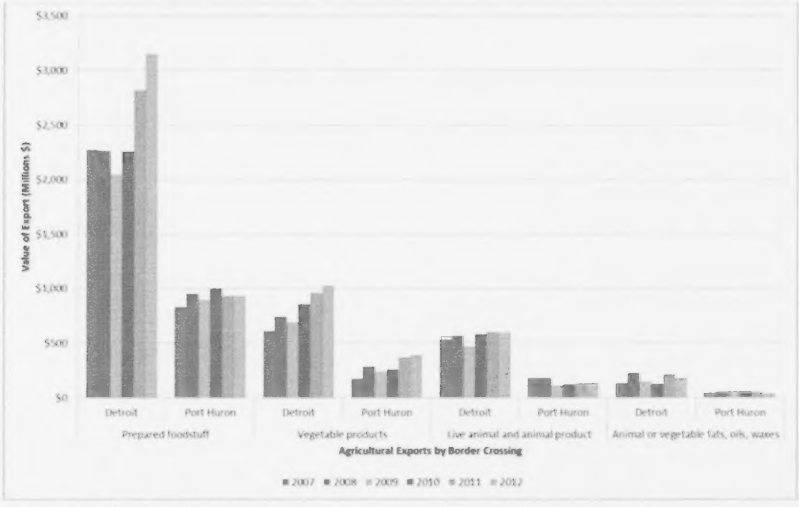


Source: Annual Survey of Manufactures and Logging, Statistics Canada

9 Appendix C

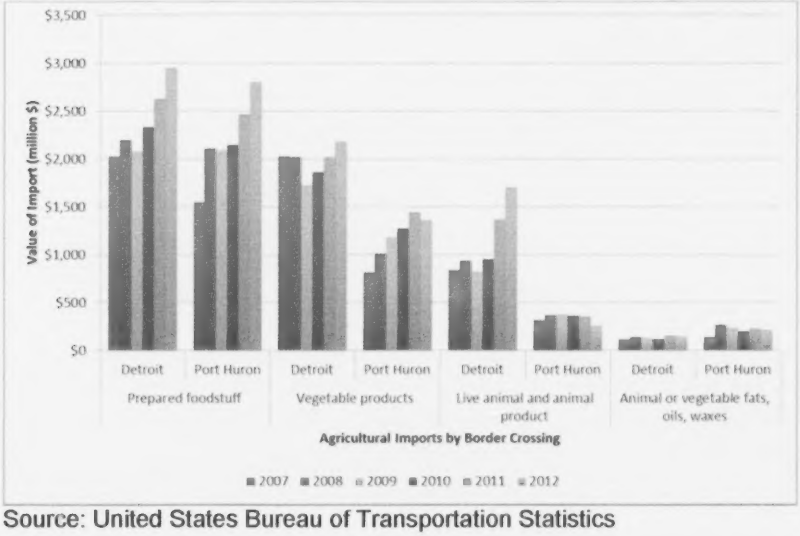
9.1 Detailed Agri-food Trade at Windsor/Detroit and Sarnia/Port Huron Border Crossings

Figure 20 – Value of agricultural products exported through the Windsor/Detroit and Sarnia/Port Huron border crossing, from 2007 to 2012



Source: United States Bureau of Transportation Statistics

Figure 21 – Value of agricultural products imported through the Windsor/Detroit and Sarnia/Port Huron border crossing, from 2007 to 2012



Source: United States Bureau of Transportation Statistics

9.2 Breakdown of Agri-Food Exports

The composition of the types of agricultural and food products exported via each border crossing did not change much between 2007 and 2012, therefore in this section, we will look at the annual average of the share of each category of agricultural and food products exported through each border crossing.

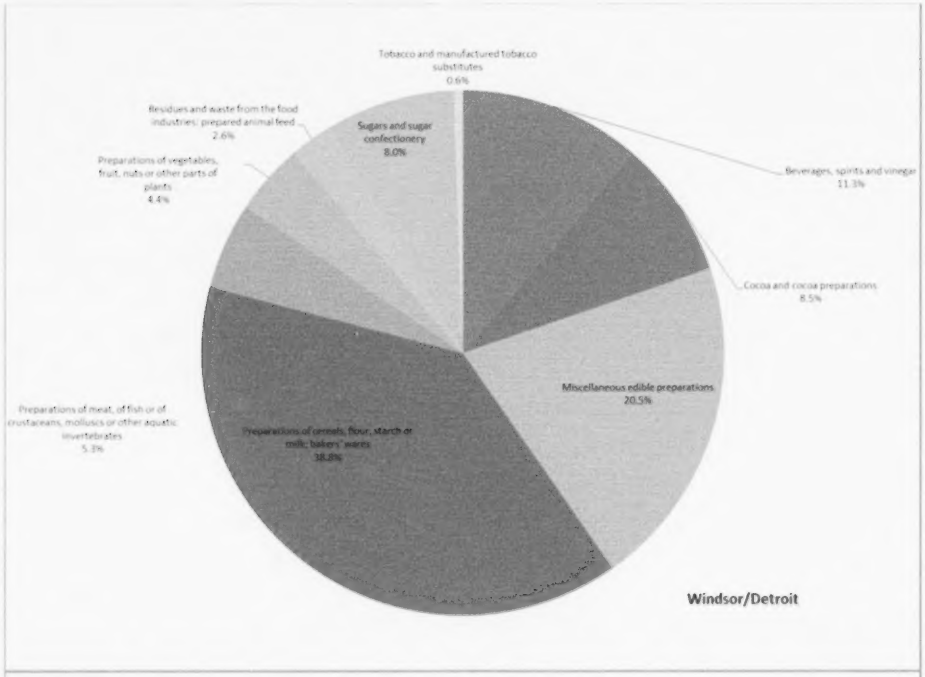
Prepared food exports are broken down into 9 categories. Prepared cereal, flour, starch or milk, and bakers' wares dominate prepared food exports, for both Windsor/Detroit and Sarnia/Port Huron crossing. Approximately 38.9% of prepared food exports via the Windsor/Detroit port were cereal, flour, starch, or milk (powders) (baked goods). The next category is miscellaneous edible preparations, which made up approximately one-fifth of prepared foodstuff exported via each port.

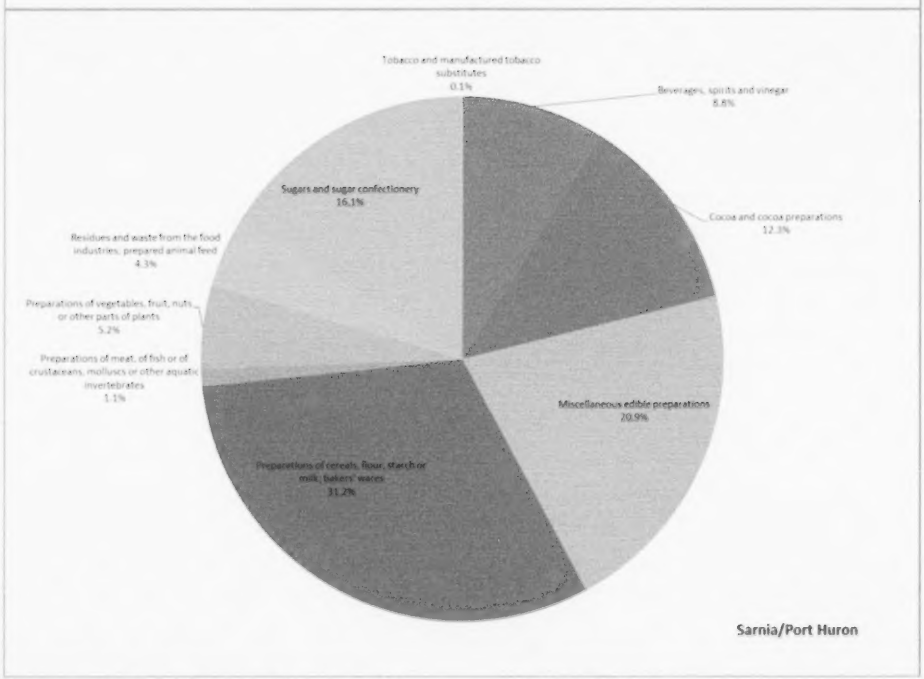
Figure 22 shows the composition of prepared food export at the Windsor/Detroit and Sarnia/Port Huron border crossing (average annual share of export value from 2007 to 2010). The proportions of types of prepared food products exported through the two crossings are very similar. The majority of prepared foods exported through both border crossing were prepared cereal, flour, starch or milk, bakers' wares. The majority of vegetables exported through Sarnia/Port Huron is cereal/ grains (26.4%, $48.7 million in 2007 and $82.7 million in 2012), compared to Windsor/Detroit (13.3%, $63.1 million in 2007 and $159.8 million in 2012).

Figure 23 shows the composition of vegetable exports at the Windsor/Detroit and Sarnia/Port Huron border crossing (average annual share of export value from 2007 to 2010). There are major differences in the type of vegetable products exported through the two crossings. Over 61% of vegetable products ($494.4.3 million in 2007 and $531.2 million in 2012) exported via Windsor/Detroit are edible vegetables, compared to only 15.8% through Sarnia/Port Huron ($33.3.0 million in 2007 and $51.6 million in 2012). Sarnia/Port Huron exports cereal/ grains (26.4%, $48.7 million in 2007 and $82.6 million in 2012), compared to Windsor/Detroit (13.3%, $67.8. million in 2007 and $159.8 million in 2012).

Figure 24 shows the composition of animal and animal products exported at the Windsor/Detroit and Sarnia/Port Huron border crossing from 2007 to 2010. Composition in the export of live animal and animal products were sharply different between the two border crossings, with meat and offals making up a majority of export in this category through the Windsor/Detroit border crossing (53.9%, $267.2. million in 2007 and $314.2 million in 2012). Meat and meat offal only make up 1.4% of export through the Sarnia/Port Huron border. At the Sarnia/Port Huron border, live animal exports dominate this category at 60.5% of animal and meat export ($99.5million in 2007 and $71.9 million in 2012). Note that the absolute value of live animals exported through Windsor/Detroit is still much higher, although there seems to be a decline from a high of $153.1 million in 2008 to $94.7 million in 2012.

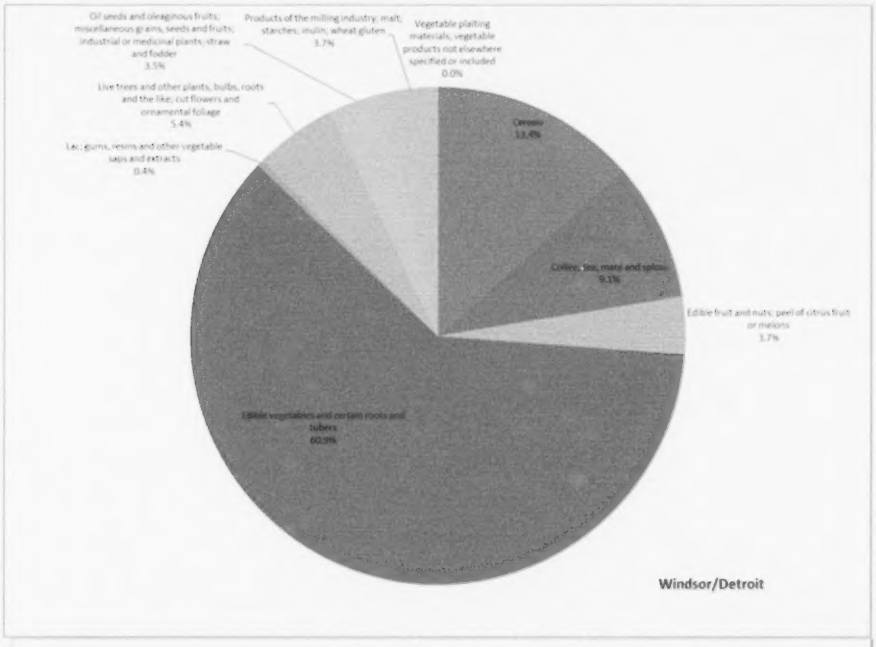
Figure 22 – Composition of prepared food export at the Windsor/Detroit and Sarnia/Port Huron border crossing, average annual share of export value from 2007 to 2010

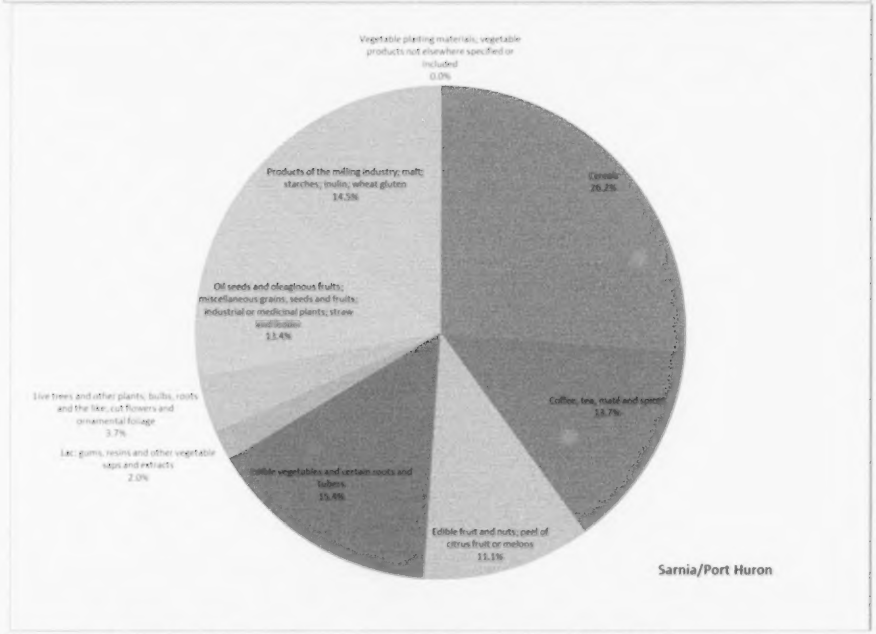

Tobacco and manufactured tobacco substitutes 0.6%
Residues and waste from the food industries; prepared animal feed 2.6%
Sugars and sugar confectionery 8.0%
Preparations of vegetables, fruit, nuts or other parts of plants 4.4%
Beverages, spirits and vinegar 11.3%
Cocoa and cocoa preparations 8.5%
Miscellaneous edible preparations 20.5%
Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates 5.3%
Preparations of cereals, flour, starch or milk; bakers' wares 38.8%
Windsor/Detroit


Tobacco and manufactured tobacco substitutes 0.1%
Beverages, spirits and vinegar 8.8%
Sugars and sugar confectionery 16.1%
Cocoa and cocoa preparations 12.3%
Residues and waste from the food industries; prepared animal feed 4.3%
Preparations of vegetables, fruit, nuts or other parts of plants 5.2%
Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates 1.1%
Miscellaneous edible preparations 20.9%
Preparations of cereals, flour, starch or milk; bakers' wares 31.2%
Sarnia/Port Huron

Source: United States Bureau of Transportation Statistics

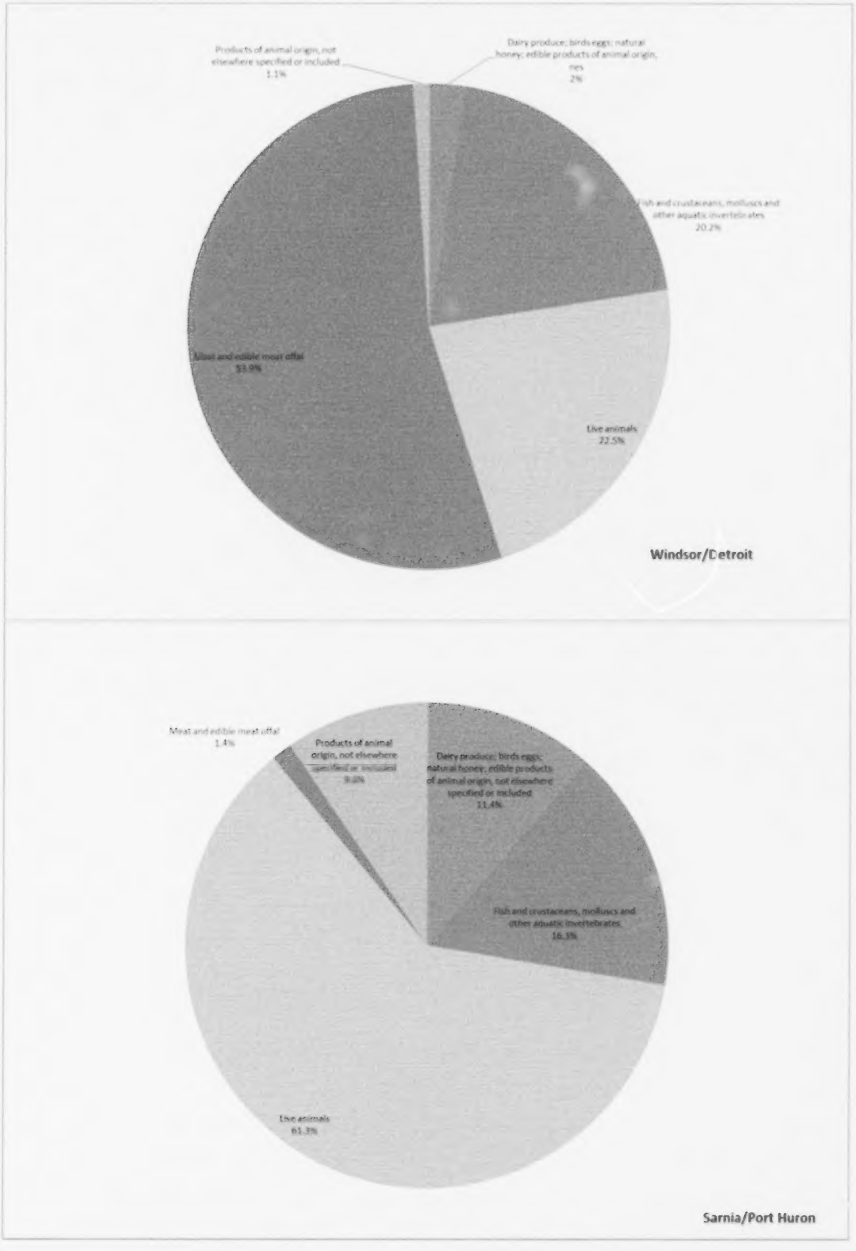
Figure 23 – Composition of vegetable export at the Windsor/Detroit and Sarnia/Port Huron border crossing, average annual share of export value from 2007 to 2010


Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruits; industrial or medicinal plants; straw and fodder
3.5%
Products of the milling industry; malt; starches; inulin; wheat gluten
1.7%
Vegetable plaiting materials; vegetable products not elsewhere specified or included
0.0%
Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
5.4%
Lac; gums, resins and other vegetable saps and extracts
0.4%
Cereals
13.4%
Coffee, tea, maté and spices
9.1%
Edible fruit and nuts; peel of citrus fruit or melons
1.7%
Edible vegetables and certain roots and tubers
60.9%
Windsor/Detroit


Vegetable plaiting materials; vegetable products not elsewhere specified or included
0.0%
Products of the milling industry; malt; starches; inulin; wheat gluten
14.5%
Cereals
26.2%
Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruits; industrial or medicinal plants; straw and fodder
13.4%
Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
3.7%
Lac; gums, resins and other vegetable saps and extracts
2.0%
Coffee, tea, maté and spices
13.7%
Edible vegetables and certain roots and tubers
15.4%
Edible fruit and nuts; peel of citrus fruit or melons
11.1%
Sarnia/Port Huron

Source: United States Bureau of Transportation Statistics

Figure 24 – Composition of animal and animal products export at the Windsor/Detroit and Sarnia/Port Huron border crossing, average annual share of export value from 2007 to 2010


Products of animal origin, not elsewhere specified or included 1.1%
Dairy produce; birds eggs; natural honey; edible products of animal origin, nes 2%
Fish and crustaceans, molluscs and other aquatic invertebrates 20.2%
Meat and edible meat offal 53.9%
Live animals 22.5%
Windsor/Detroit
Meat and edible meat offal 1.4%
Products of animal origin, not elsewhere specified or included 9.8%
Dairy produce; birds eggs; natural honey; edible products of animal origin, not elsewhere specified or included 11.4%
Fish and crustaceans, molluscs and other aquatic invertebrates 16.3%
Live animals 61.3%
Sarnia/Port Huron

Source: United States Bureau of Transportation Statistics

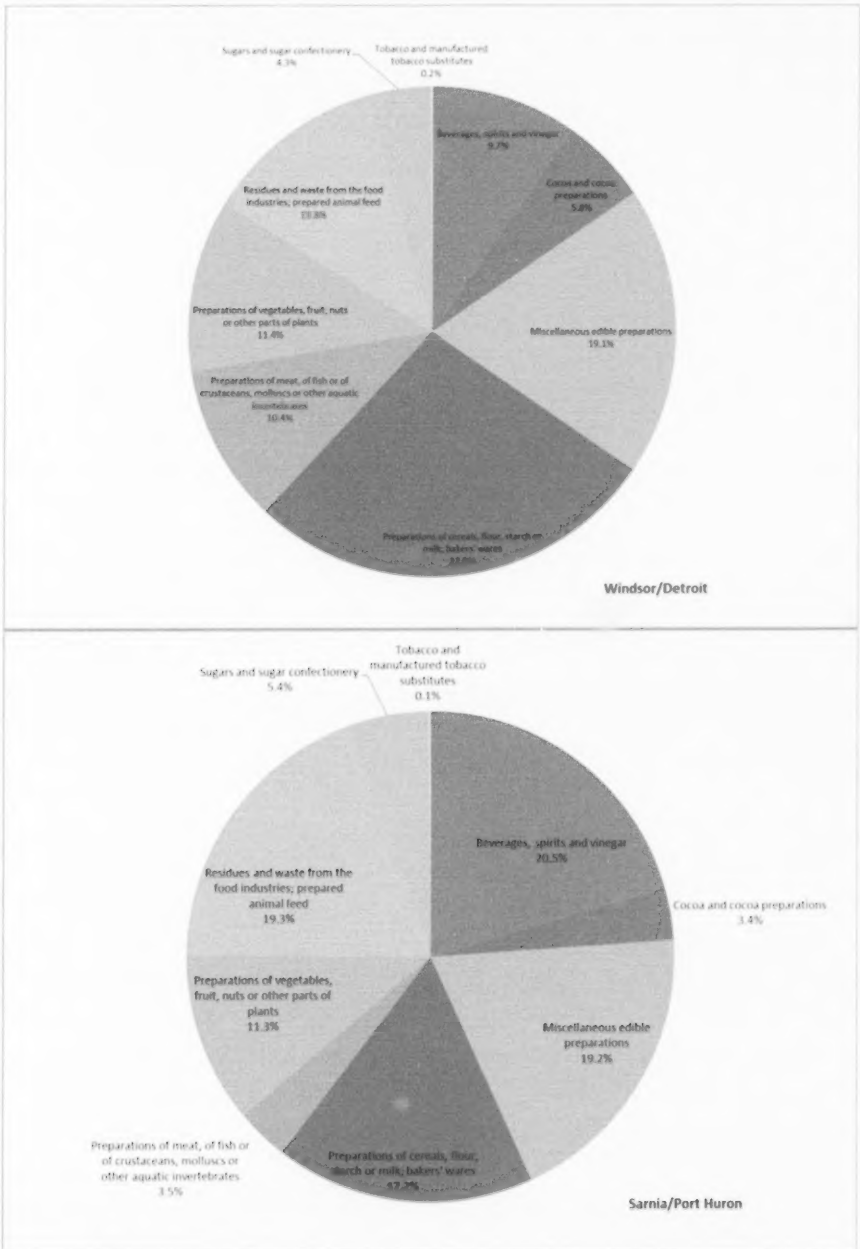
9.3 Breakdown of Agri-Food Imports

Figure 23 shows the makeup of prepared food imports through the Windsor/Detroit and Sarnia/Port Huron border crossings. The distribution of prepared food imports is similar to that for exports. It is notable that Beverages, spirits and vinegar imports through Sarnia/Port Huron make up over 20% of the prepared foods category for imports, averaging $445.65 million over the period between 2007 and 2012, this is nearly double the value of imports of the same subcategory through the border crossing at Windsor/Detroit.

The largest subcategory of vegetable product imports through the Windsor/Detroit and Sarnia/Port Huron borders were edible fruit and nuts. The value of edible fruits and nuts imported through these ports was 1.07 billion in 2007 and 1.38 billion in 2012. . Far more edible vegetables, roots and tubers are shipped through Windsor/Detroit ($357 million more in 2012) than through Sarnia/Port Huron. While more cereals were imported through Sarnia/Port Huron until 2012, when more cereals were imported through the Windsor/Windsor/Detroit border crossing.

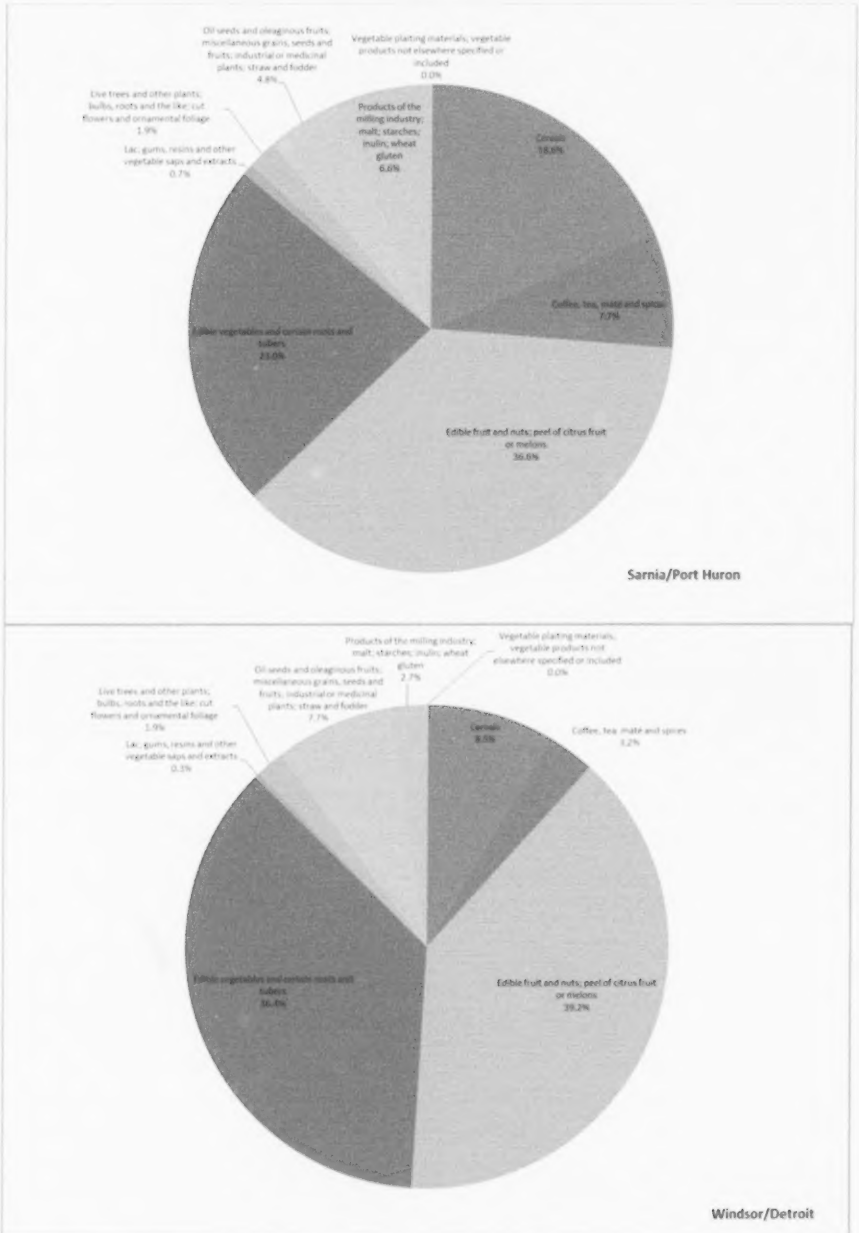
Meat and edible offal makes up most of the value of animal products shipped through the Windsor/Detroit and Sarnia/Port Huron crossings. It represents 86% of the average value of all animal product imports between 2007 and 2012. The value of meat and edible offal imported in 2007 was 9.62 billion increasing to 1.63 million in 2012., with 81% of this value being shipped through the Windsor/Detroit crossing. The value of live animals imported through Sarnia/Port Huron in 2012 was 12 million more than are imported through Windsor/Detroit at $4.4 million.

Figure 25 – Composition of prepared food imports at the Windsor/Detroit and Sarnia/Port Huron border crossing, average annual share of export value from 2007 to 2010


Sugars and sugar confectionery 4.3%
Tobacco and manufactured tobacco substitutes 0.2%
Beverages, spirits and vinegar 9.7%
Cocoa and cocoa preparations 5.8%
Residues and waste from the food industries; prepared animal feed 19.8%
Preparations of vegetables, fruit, nuts or other parts of plants 11.4%
Miscellaneous edible preparations 19.1%
Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates 10.4%
Preparations of cereals, flour, starch or milk; bakers' wares 19.0%
Windsor/Detroit
Sugars and sugar confectionery 5.4%
Tobacco and manufactured tobacco substitutes 0.1%
Beverages, spirits and vinegar 20.5%
Residues and waste from the food industries; prepared animal feed 19.3%
Cocoa and cocoa preparations 3.4%
Preparations of vegetables, fruit, nuts or other parts of plants 11.3%
Miscellaneous edible preparations 19.2%
Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates 3.5%
Preparations of cereals, flour, starch or milk; bakers' wares 17.3%
Sarnia/Port Huron

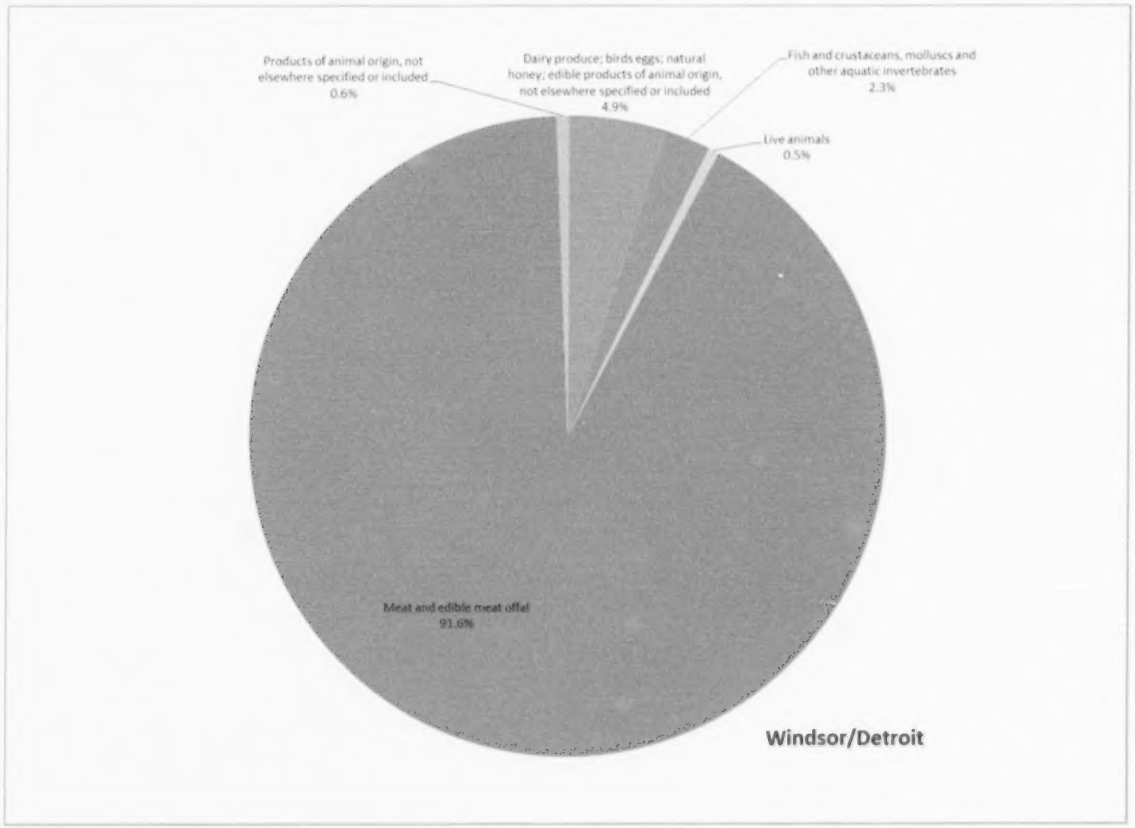
Source: United States Bureau of Transportation Statistics

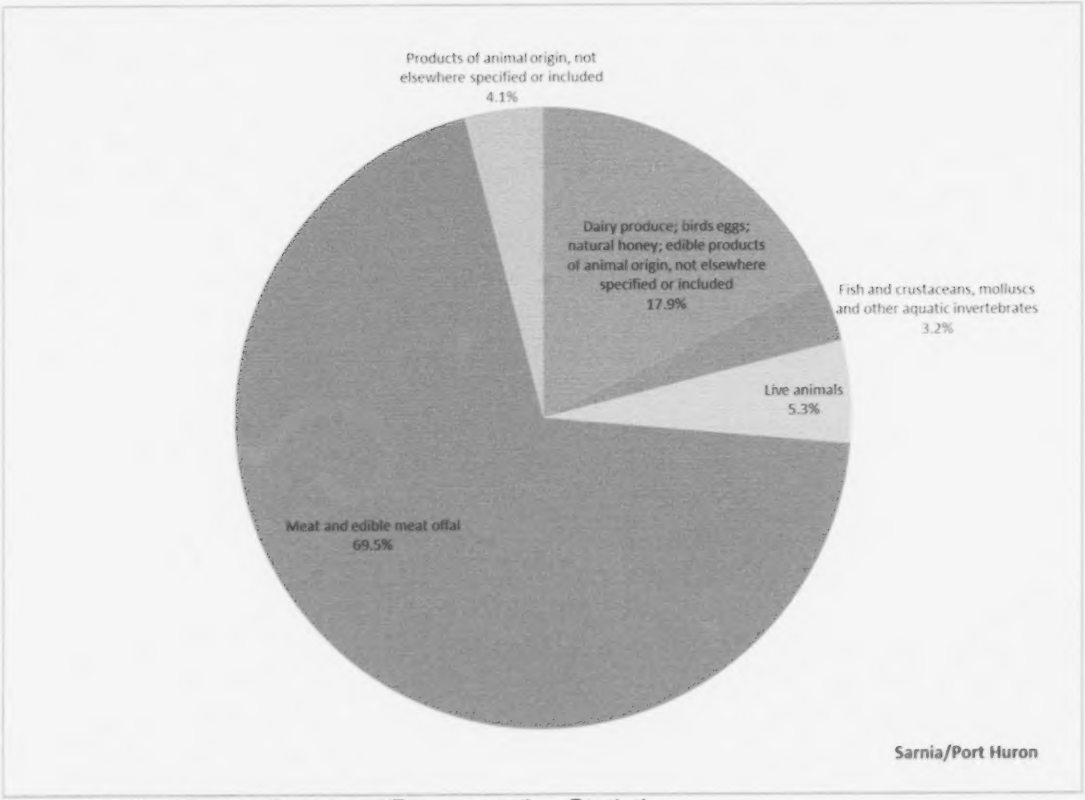
Figure 26 – Composition of vegetable imports at the Windsor/Detroit and Sarnia/Port Huron border crossing, average annual share of export value from 2007 to 2010


Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruits; industrial or medicinal plants; straw and fodder
4.8%
Vegetable plating materials; vegetable products not elsewhere specified or included
0.0%
Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
1.9%
Products of the milling industry; malt; starches; inulin; wheat gluten
6.0%
Lac; gums, resins and other vegetable saps and extracts
0.7%
Cereals
18.8%
Coffee, tea, mate and spices
7.7%
Edible vegetables and certain roots and tubers
23.0%
Edible fruit and nuts; peel of citrus fruit or melons
36.6%
Sarnia/Port Huron
Products of the milling industry; malt; starches; inulin; wheat gluten
2.7%
Vegetable plating materials; vegetable products not elsewhere specified or included
0.0%
Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruits; industrial or medicinal plants; straw and fodder
7.7%
Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
1.9%
Lac; gums, resins and other vegetable saps and extracts
0.3%
Cereals
8.5%
Coffee, tea, mate and spices
3.2%
Edible vegetables and certain roots and tubers
36.4%
Edible fruit and nuts; peel of citrus fruit or melons
39.2%
Windsor/Detroit

Source: United States Bureau of Transportation Statistics

Figure 27 – Composition of animal and animal products imports at the Windsor/Detroit and Sarnia/Port Huron border crossing, average annual share of export value from 2007 to 2010


Products of animal origin, not elsewhere specified or included
0.6%
Dairy produce; birds eggs; natural honey; edible products of animal origin, not elsewhere specified or included
4.9%
Fish and crustaceans, molluscs and other aquatic invertebrates
2.3%
Live animals
0.5%
Meat and edible meat offal
91.6%
Windsor/Detroit


Products of animal origin, not elsewhere specified or included
4.1%
Dairy produce; birds eggs; natural honey; edible products of animal origin, not elsewhere specified or included
17.9%
Fish and crustaceans, molluscs and other aquatic invertebrates
3.2%
Live animals
5.3%
Meat and edible meat offal
69.5%
Sarnia/Port Huron

Source: United States Bureau of Transportation Statistics

10 Appendix D

Summary of the Agricultural Economic Impact and Development Study for Essex, Chatham-Kent, Windsor & Pelee Island. (2002)

The total population of Essex County was 374,975 in 2001 and the population of Kent county was 107,709. The population of the two counties is slightly older than the rest of Ontario. Due to its location and the 401 highway the area around Essex and Chatham-Kent serves as an access point to the rest of southwestern Ontario and to the United States. Within a one hour drive of Essex there are 4.5 million people, with 25 million within a 6 hour drive.

There is more employment in both agriculture and manufacturing in the region compared to other regions of Ontario. The population has a slightly lower level of education, with fewer people completing education beyond the high school level. Children in farm families in the region are choosing non-farm careers.

Chatham-Kent and Essex County have greater diversity in agricultural production than other regions of Ontario. However, 64% of farms in Essex and 74% of farms in Chatham-Kent continue to be involved in traditional grains and oilseeds production. Excellent soil and climate do allow producers to look to specialty crops such as tomatoes, seed corn, field vegetables and tobacco as alternatives. The region has 76% of sugar beet acreage in Ontario, 84% of tomato acreage and 44% of pepper acreage.

Gross farm receipts were $471 million for Essex count and $440 million for Chatham-Kent in 2001. Based on average receipts per farm both Essex county and Chatham-Kent The estimated direct and indirect sales supported by agriculture and related businesses in Chatham-Kent are $2 billion and $2.1 billion in Essex county. There are 16,087 jobs in Chatham-Kent and 15,720 jobs in Essex in agriculture and related industries. Including businesses further up the supply chain these increase to $2.6 billion with 32,000 jobs for Chatham-Kent and $2.8 billion with 31,000 in Essex.

Net revenue per acre for Essex and Chatham-Kent was higher than for Ontario in 2001, at $186 and $153 respectively, compared to Ontario at $95.

Estimated tax revenues from farms were $7.9 million in Chatham-Kent and $6.7 million in Essex in 2002. This represented 9.6% and 4.9% of total taxes collected in the two municipalities, respectively. Per acre taxes were about $8.50 for Chatham-Kent and $13.00 in Essex in 2002.

The report analyzes the economic impact of various agricultural sectors in the regions

Industry	Economic Impact	Employment*
Grape/Wine	>$25 million	>300
Greenhouse	$300 million (gross receipts)	
Mushroom Production	$40 million	~800
All Primary Agricultural Production	$911 million	10595

*Includes full-time, part-time and seasonal

They also note that seed corn and tobacco production provides employment for youth and temporary foreign workers, with an estimated $5.2 million labour commitment for detasseling and processing seed corn and $8 million for Tabaco production in the region. Chatham-Kent and Essex bring in over 3,200 temporary foreign workers annually representing 25% of all temporary foreign workers entering Ontario. Hourly wages for temporary workers was $7.61. The study notes that farmers have difficulty attracting workers. Total wage and non-wage (housing, transportation, busing, utilities, etc.) payments to off shore labourers that work in the region are estimated to be $20.8 million. Off farm income represents 20-25% of farm family income for families with full-time farmers, and 2/3 or more of family income for part time farmers.

Total wages and salaries for agricultural labour in 2001 were $98 million in Essex-Pelee and 40.8 million in Chatham-Kent.

The study notes challenges in the business environment in the region, specifically: new environmental regulations, exchange rate, ability to identify market opportunities, agricultural leadership drain and urban pressure on farm land values. The study also looks at non-economic benefits of agriculture to the regions including: vibrant rural communities, healthier environment, recreation and tourism opportunities and "positive social enhancements to the lives of others beyond just farmers." Additionally they note the challenge of representation on local government councils, which can pass by-laws that negatively impact growth in the agriculture sector.

The greenhouse industry is seen as a potential area for growth in the regions with comparative advantage in climate, proximity to markets and access to gas and water. As of 2001, farm gate value of tomato and cucumber production was over $300 million. There are 11 packing sheds between the two regions, which pack greenhouse produce for retail. In 2001 the value of greenhouse floriculture sales was $72 million. The greenhouse industry has also created a spinoff industry in the region for recycling greenhouse waste. The estimated value to the local and provincial economy from greenhouse production is $800 million. The availability of qualified labour continues to be a challenge for the industry. Trade issues concerning greenhouse tomatoes has limited expansion of the industry somewhat and may be a challenge going forward.

The region is part of Ontario's "Designated Viticulture Areas", boasting an expanding wine industry, which is used to promote tourism in the region. The paper suggests that further promotion of the Canada South Coast/Canada South Wine Route would be a major marketing boost to the area. The study notes that grapes are being brought from the Niagara region for processing, which indicates room for expanded local production to meet the needs of local wine producers.

Expansion of e-commerce is also seen as a potential opportunity by area agricultural producers.

Agriculture related businesses in the two regions employ 3,181 full time employees, with gross sales of $1.15 billion. The agricultural lending sector is important to the region, with an estimated $808 million lent in 2001. The insurance industry collects approximately $11.5 million in agriculture related premiums in the regions.

Challenges to agri-business include: falling profit margins, need for product diversification and increased specialization to meet niche markets, competition for land in the seed industry, need to show U.S. parent companies value for new investment. Companies are dealing with some of these challenges by offering bundled services or full-service to customers.

There are many food processors located in the region. These include:

- H.J. Heinz Company of Canada Ltd, Leamington
- Thomas Canning Ltd, Maidstone
- Harvest-Pac Products Inc., Chatham
- ConAgra, Dresden
- Bonduelle, Tecumseh
- Weils Food Processing Ltd, Wheatley
- Cavendish Foods, Wheatley
- Sun-Brite Canning, Ruthven

Challenges that are identified for processors in the region include: environmental pressures; lack of labour; lack of profit and insufficient capital.

Agricultural production in the two municipalities is estimated to result in 7,174 jobs in related industries and a further 14,038 "induced" jobs as a result of economic multipliers.

Using the same methodology as McEwan (Economic Impact of the Ontario Pork Industry, 1997) for estimating the impact of agriculture in Chatham-Kent, the $440 million in farm gate sales resulted in $2.6 billion for the Ontario economy and $2.8 billion in Essex. Chatham-Kent agriculture also creates 31,994 jobs for the rest of the economy, while Essex agriculture creates 31,264 jobs.

11 Appendix E

11.1 List of Organizations and Firms Interviewed

1. Canadian Manufacturers and Exporters-Headquarters
2. Ontario Greenhouse Vegetable Growers
3. Alliance of Ontario Food Processors
4. Westmoreland Foods
5. Mastronardi Produce Limited
6. Canadian Border Services Agency-Ontario (Windsor office)
7. OMAFRA- Food Processing Branch
8. Ontario Trucking Association
9. AAFC-Regional Office/Headquarters
10. Flowers Canada
11. Food and Consumer Products Canada
12. Canadian Border Services Agency
13. General Mills Canada
14. Landscape Ontario/Canadian Nursery and Landscaping Association
15. Grain Farmers of Ontario
16. Ontario AgriBusiness Association
17. Canadian Consulate ,Detroit
18. Ingredion, US offices
19. Ontario Fruit and Vegetable Growers Association
20. Chatham-Kent Economic Development
21. Canadian Food Exporters Association
22. Michigan Department of Agriculture and Rural Development
23. RussellFarrow
24. Maple Leaf Foods

11.2 Interview Guide – Industry

1. Please describe your firm/organization- scale, scope, products/services.
2. To what extent is your firm exposed to trade, either in terms of product/service exports or imports of inputs/services?
3. What challenges have you experienced, either inbound or outbound, in product movement through the Windsor/Windsor/Detroit or Sarnia/Port Huron border crossings? What trends have you noted?
4. To what extent are *product* regulations (e.g. MRL's) an issue? In what way?
5. To what extent are *process* regulations (e.g. truck weight limits) an issue? In what way?

6. To what extent are *infrastructure and resource/capacity levels* an issue? In what way?
7. To what extent are *interactions/relationships* with border agencies an issue? In what way?
8. How have these issues impacted your business and your customers? What were the short-term impacts? Long-term impacts?
9. What key changes, public or private, could be made that would dramatically improve the situation? How would it improve it?

11.3 Interview Guide – Government

1) Please describe the role your division of government has in the Canada-US agri-food trade, specifically agri-food trade at the Windsor/Windsor/Detroit and Sarnia/Port Huron border crossings. What is your specific role?
2) What challenges have you or your stakeholders experienced either inbound or outbound, in product movement through the Windsor/Windsor/Detroit or Sarnia/Port Huron border crossings? What trends have you noted?
3) To what extent are *product* regulations (e.g. MRL's) an issue? In what way?
4) To what extent are *process* regulations (e.g. truck weight limits) an issue? In what way?
5) To what extent are *infrastructure and resource/capacity levels* an issue? In what way?
6) To what extent are *interactions/relationships* with border agencies an issue? In what way?
7) How have these issues impacted the business of your stakeholders and/or their costumers? What were the short-term impacts? Long-term impacts?
8) What key changes, public or private, could be made that would dramatically improve the situation? How would it improve it?